Standard Treatment Guidelines In Homoeopathy

Volume 1

Revised and Updated edition

केन्द्रीय होम्योपैथी अनुसंधान परिषद्

Central Council For Research in Homoeopathy

Ministry of Ayush, Govt. of India

Standard Treatment Guidelines In Homoeopathy

Volume 1

Revised and Updated edition

Central Council for Research in Homoeopathy

Ministry of Ayush, Govt. of India

2023

Standard Treatment Guidelines in Homoeopathy

DISCLAIMER

This Standard Treatment Guidelines (STGs) in Homoeopathy, Volume 1, Revised and updated edition, contains STGs on 20 clinical conditions, may prove to be a concise and ready reference. It makes no pretension to being anything more than an introduction to the important conditions; in no sense it is put forward as complete treatise. Readers are advised to check the most current information. These guidelines will facilitate practitioners for helping patients, however, it is the responsibility of the practitioners relying on their clinical experience and knowledge of the patients to make diagnosis, to determine dosages and the best treatment for each individual patient as the homoeopathic principles.

©Central Council for Research in Homoeopathy, 2023

First edition 2018

Revised and updated edition 2023

All rights reserved

No part of this book should be reproduced, stored in retrieval system or transmitted in any form or by any means: electronic, mechanical, photocopying, recording or otherwise, without the prior written permission of Central Council for Research in Homoeopathy.

Request for permission to reproduce or translate the CCRH publications-wether for sale or for non commercial distribution- should be addressed to Director General, Central Council for Research in Homoeopathy, Jawahar Lal Nehru Bhartiya Chikitsa Avam Homoeopathy Anusandhan Bhawan, 61-65, Institutional Area, Opp. D-Block, Janakpuri, New Delhi-110058 (India). Tel:91-11-28525523 Fax: 91-11-28521060, Website: www.ccrhindia.nic.in, E-mail: stg.ccrh@gmail.com

ISBN : 978-93-81458-78-5

Publisher : Central Council for Research in Homoeopathy

Price : ₹ 750.00

Printed by : Chauhan Art Press, Karol Bagh, New Delhi-110005

CONTENTS

S.No.	Topic	Page No.
I	Preface to Revised and updated edition	V
II	Preface to First edition	VII
III	Acknowledgements	IX
IV	Abbreviations	XIII
V	Introduction	XVII
VI	Homoeopathic management of diseases	XIX
1	Acute otitis media	1
2	Attention deficit hyperactivity disorder	13
3	Alcohol dependence	27
4	Benign prostatic hyperplasia	39
5	Bronchial asthma	51
6	Cancer	65
7	Depression	81
8	Diabetes mellitus	93
9	Diarrhoea	109
10	Hypertension	123
11	Irritable bowel syndrome	139
12	Lymphatic filariasis	151
13	Menopause	165
14	Polycystic ovarian syndrome	177
15	Psoriasis	189
16	Rhinitis	203
17	Sinusitis	213
18	Urolithiasis	229
19	Uterine fibroids	243
20	Vitiligo	255

PREFACE TO REVISED AND UPDATED EDITION

All the copies of the first edition (volume I) have been sold out with wider dissemination and acceptance by academicians, clinicians, researchers and teachers. The first edition was published with the aim to impart knowledge, updated information, uniform guidelines in homoeopathic treatment for students and practitioners. This edition has following additional features:

- Updated incidence and prevalence
- Updated assessment and evaluation scales
- Updated homoeopathic research studies on concerned clinical condition

It is hoped that readers will find this edition useful. Feedback will encourage us in taking up more of such endeavours.

Council profoundly acknowledges the insightful contributions of the content developers, reviewers and editors.

Dr. Subhash Kaushlk
Director General
Central Council for Research in Homoeopathy

PREFACE TO FIRST EDITION

It was often said that "Homoeopathy treats the patient and not the disease" but the relevance of the statement was only limited to olden days when disease diagnosis was not much developed. The statement only highlighted the fact that a homoeopathic practitioner could treat/ provide relief to a patient based on the available symptomatology barring the nosological labelling which wasn't that well developed.

Knowledge about diagnosis in earlier times was limited and was primarily done for prognosis of the case. With advances in sophisticated techniques, medical diagnosis has come a long way, from empirical diagnosis to clinical and laboratory diagnosis which has widened its scope in management of the patient.

This advancement in medical field has been of paramount importance for a homoeopathic practitioner as well who is faced with the challenge of treating various diseases. A homoeopathic physician has a dual task of establishing a disease diagnosis as well as a patient diagnosis as per the individualistic holistic approach of the system of medicine. Both are vital in identification of the indicated remedy for the management/treatment of the patient. Casual observation, as well as more systematic study of prescribing practices, frequently reveals a pattern of tremendous diversity among prescribers in the treatment of even the most common conditions. A Standard Treatment Guideline (STG) which provides standardized guidance of diagnosis and therapeutic management of a diseased condition can be a solution to this therapeutic anarchy. Also, a simplification of treatment can facilitate the objective appraisal of value of homoeopathic system of medicine.

Over the years, RCTs/ Observational studies, experiences of homeopathic practitioners have tried to identify remedies suitable for various disease conditions per se. The Council with the aim of conducting research on scientific lines in Homoeopathy has completed 119 clinical studies and has collected data of most useful medicines in various diseases.

Council has made an attempt to develop a standardised guideline for management of diseases, based on expert consensus, review of current published scientific evidence of acceptable approaches to diagnosis, management and/or prevention of specific diseases; data from research studies. Such a systematically developed statement can assist practitioners in rational decision making about appropriate health care for specific clinical circumstances, help maintain quality standards and also represent one approach in promoting therapeutic effective and economically efficient prescribing.

In the beginning of this initiative, eighteen diseases have been identified. Each condition gives clear presentation of definition, symptoms, epidemiology, diagnosis, differential diagnosis and its general management. Apart from this the STGs also include information about various outcome measurable

questionnaires which can be used by the homoeopathic practitioner for disease assessment, treatment evaluation (follow up) and research. An algorithm of the treatment process given at the end of each disease condition helps in having bird's eye view of disease and also indicate appropriate time of referral.

The book puts forward a group of medicines found most commonly indicated in each disease as identified from published research papers, Materia Medica and inputs of experienced homoeopathic practitioners. These STGs are prepared for wider dissemination and implementation by the practitioners at large. The Council welcomes inputs and experiences of practitioners for betterment of these guidelines and looks forward to continuous updating.

While it is hoped that the book may prove to be a concise and ready reference, it makes no pretension to being anything more than an introduction to the important conditions; in no sense is it put forward as a complete treatise. Readers are advised to check the most current information. It is the responsibility of the practitioner, relying on his/her own experience and knowledge of the patient, to make diagnosis, to determine dosages and the best treatment for each individual patient, and to take all appropriate safety precautions.

Dr Raj. K. Manchanda
Director General
Central Council for Research in Homoeopathy

ACKNOWLEDGEMENTS : REVISED AND UPDATED EDITION

Facilitation and guidance

Dr. Subhash Kaushik, Director General; Dr. Sunil S. Ramteke, Deputy Director General; Central Council for Research in Homoeopathy (CCRH), New Delhi

Content editing

Dr. Varanasi Roja, RO(H)/Scientist-III; Dr. Khushboo Garg, Research Associate (H); Dr. Arti Goyal, Senior Research Fellow (H); Dr. Nisha Sehrawat, Senior Research Fellow (H); Central Council for Research in Homoeopathy (CCRH) Hqrs., New Delhi

Library Assistance : Mrs. Meenakshi Bhatia, Librarian I/C, CCRH.

Secretarial Assistance : Khushal Negi, Office Assistant, CCRH.

ACKNOWLEDGEMENTS: FIRST EDITION

Facilitation and guidance

Dr. Raj K. Manchanda, Director General, Central Council for Research in Homoeopathy (CCRH), New Delhi

Content Planning and Technical expertise

Dr. Anil Khurana, Deputy Director General, Dr. Praveen Oberai, Scientist- IV, and Dr. Varanasi Roja, Scientist-II, Central Council for Research in Homoeopathy (CCRH) Hqrs., New Delhi

Review and critical appraisal

Padmashree Dr. V.K. Gupta, former Principal, Nehru Homoeopathic Medical College and Hospital, New Delhi, Chairman, Scientific Advisory Committee (SAC), CCRH; Dr. C. Nayak, former Director General, CCRH, Chairman, Special Committee for Fundamental and Collaborative Research, CCRH; Dr. K.M. Dhawale, Director, Dr. Dhawale Memorial trust, Mumbai (DMT), Chairman, Special Committee Clinical Research, CCRH; Dr. L.K.Nanda, former Principal cum Superintendent, Dr. A.C. Homoeopathic Medical College and Hospital, Bhubaneswar, Odisha, Member, SAC, CCRH; Dr. S. K.Nanda, former Director, National Institute of Homoeopathy, Kolkata, West Bengal; Dr. Lalit Verma, former Secretary, Central Council of Homoeopathy, New Delhi; Dr. Kusum Chand, CrossLay Hospital, New Delhi; Dr. Nirupama Mishra, former Asst. Director (H), CCRH; Dr. Bindu Sharma, Scientist-IV, CCRH; Dr. Mohit Mathur, Reader (NSFG), Nehru Homoeopathic Medical College and Hospital, New Delhi; Dr. Sandhya Rastogi, Reader, BR Sur Homoeopathic Medical College and Hospital, New Delhi; Dr. Pankaj Bhatnagar, Homoeopathic consultant, Member, Governing Body, CCRH; Dr. Nandini Sharma, Homoeopathic consultant, Member, Governing body, CCRH; Doctors from ML Dhawale Trust (Dr. Bipin Jain, Dr. Sunita Nikumbh, Dr. Sachin Junagade, Dr. Trupti Swain, Dr. Swapnil Naik, Dr. Anand Kapse, Dr. Dinesh Rao, Dr. Nikunj Jani, Dr. Bhavik Parekh, Dr. Sunil Bhalinge, Dr. Shama Nayak, DMT); Dr. Vinu Krishnan, Govt Homoeopathic Cancer Centre, Wandoor, Malappuram District, Kerala

Content drafting and editing

Dr. Varanasi Roja, Scientist-II, Dr. Anupriya, Research officer(H), CCRH, Dr. Priyanka Srivastava, Senior Research Fellow(H).

Contributors for document development (CCRH)

Dr. Praveen Oberai, Scientist-IV, Dr. Varanasi Roja, Scientist-II; Dr. Chetna Deep Lamba, Scientist - II; Dr. Divya Taneja, Scientist -II; Dr. Anupriya, Research Officer (H), Dr. Swapnil Kamble, Research Officer (H); Dr. Deepti Dewan, Consultant(H); Dr. Rupali Dixit, Research Associate (H), Dr. Kalpana Gautam, former Senior Research Fellow(H), Dr. Ashish Dixit, Senior Research Fellow (H), CCRH, Dr. Sandhya Kashyap, former Senior Research Fellow (H); Dr. Rajesh, Senior Research Fellow(H).

Library Assistance: Mrs. Meenakshi Bhatia, Junior Librarian I/C, CCRH

Secretarial Assistance: Hem Chaudhary, DEO and Vandana Sharma, DEO, CCRH

ABBREVIATIONS

1.	17-OHP	17 Hydroxy Progesterone
2.	7D5L	Seven Domins Five Levels
3.	ABPA	Allergic Bronchopulmonary Aspergillosis
4.	ABRS	Acute Bacterial Rhinosinusitis
5.	ADD	Attention Deficit Disorder
6.	ADHD	Attention Deficit Hyperactive Disorder
7.	ADL	Acute Adenolymphangitis
8.	ADS	Alcohol Dependence Scale
9.	AES	Androgen Excess Society
10.	AFP	Alfa-Fetoprotein
11.	AJC	American Joint Committee
12.	ALT	Alanine Aminotranferases
13.	Anti TPO	Anti Thyroperoxidase
14.	AOM	Acute Otitis Media
15.	AOM-SOS scale	Acute Otitis Media- Severity of Symptoms Scale
16.	ARSS	Acute Rhinitis Symptoms Score
17.	AST	Aspartate Aminotransferases
18.	AUA-SI	American Urological Association- Symptom Index
19.	AUDIT	Alcohol Use Disorders Identification Test
20.	AW	Acute Withdrawl
21.	AYUSH	Ayurveda, Yoga, Unani, Siddha and Homoeopathy
22.	BDI	Beck's Depressive Index
23.	BGT	Bender Gestalt Test
24.	BMI	Body Mass Index
25.	BOO	Bladder Outflow Obstruction
26.	BPE	Benign Prostate Enlargement
27.	BPH	Benign Prostatic Hyperplasia
28.	BPT	Bronchoprovocation Test
29.	BSA	Body Surface Area
30.	BUN	Blood Urea Nitrogen
31.	CAGE	Cut down, Annoyed, Guilty, Eye opener
32.	CAH	Congenital Adrenal Hyperplasia
33.	CAM	Complementary and Alternative Therapies
34.	CBC	Complete Blood Count
35.	CBT	Cognitive Behavioral Therapy
36.	CCRH	Central Council for Research in Homoeopathy
37.	CDLQI	Children's Dermatology Life Quality Index
38.	CDP	Complex Decongestive Physiotherapy
39.	CDT	Carbohydrate Deficient Transferrin

40.	CEA	Carcino-embroyonic Antigen
41.	CF	Cystic Fibrosis
42.	CHD	Coronary Heart Disease
43.	CIWA-Ar	Clinical Institute Withdrawl Assessment for Alcohol Scale-Revised
44.	CNS	Central Nervous System
45.	COPD	Chronic Obstructive Pulmonary Disease
46.	CPRS-R	Conners Parent Rating Scale- Revised
47.	CRS	Chronic Rhinosinusitis
48.	C-section	Caesarean Section
49.	CT	Computed Tomography
50.	CTRS-R	Conners Teacher Rating Scale - Revised
51.	CVD	Cardiovascular Disease
52.	DALYs	Disability Adjusted Life Years
53.	DASH	Dietary Approaches to Stop Hypertension
54.	DHEAS	Dehydroepiandrosterone-sulfate
55.	DHT	Dihydrotestosterone
56.	DLQI	Dermatology Life Quality Index
57.	DM	Diabetes Mellitus
58.	DOPA	Dihydroxyphenylalanine (Dopamine)
59.	DSM	Diagnostic Statistical Manual of Mental Disorder
60.	ELISA	Enzyme Linked Immunosorbent Assay
61.	ENT	Ear Nose Throat
62.	EORTC	European Organisation for Research and Treatment of Cancer
63.	ESAS	Edmonton Symptom Assessment System
64.	ESWL	Extracorporeal Shock Wave Lithotripsy
65.	FEV1	Forced Expiratory Volume in First Second
66.	FPG	Fasting Plasma Glucose
67.	FSH	Follicular Stimulating Hormone
68.	FVC	Forced Vital Capacity
69.	GABA	Gamma Aminobutyric Acid
70.	GDM	Gestational Diabetes Mellitus
71.	GGT	Gamma Glutamyl Transferases
72.	HbA1c	Glycated/Glycelated Haemoglobin
73.	HCG	Human Chorionic Gonadotrophin
74.	HDL	High Density Lipoprotein
75.	HDRS	Hamilton Depression Rating Scale
76.	HER-2	Human Epidermal Growth Factor Receptor 2
77.	HIV	Human Immune Deficiency Virus
78.	HRQoL	Health Related Quality of Life
79.	HTN	Hypertension
80.	IBS	Irritable Bowel Syndrome

81.	IBS-QOL	Irritable Bowel Syndrome - Quality of Life Questionnaire
82.	ICD-10	10th Revision of The International Classification of Disease and Health Problems
83.	ICT	Immunochromatographic Test
84.	IFA	Indirect Fluorescent Antibody
85.	IFG	Impaired Fasting Glucose
86.	Ig E	Immunoglobulin E
87.	IGT	Impaired Glucose Tolerance
88.	IHA	Indirect Haemagglutination Assay
89.	INSEARCH	Indian Study on Epidemiology of Asthma, Respiratory Symptoms and Chronic Bronchitis
90.	IPSS	International Prostate Symptom Score
91.	IPT	Interpersonal Psychotherapy
92.	IV	Intravenous
93.	IVU	Intravenous Urogram
94.	JNC	Joint National committee
95.	KUB	Kidney Ureter Bladder
96.	LDL	Low Density Lipoprotein
97.	LF	Lymphatic Filariasis
98.	LH	Luteinizing Hormone
99.	MAST-R	Michigan Alcohol Screening Test- Revised
100.	MCV	Mean Corpuscular Volume
101.	MDA	Mass Drug Administration
102.	MLD	Manual lymph drainage
103.	MRI	Magnetic resonance Imaging
104.	MRS	Menopause Rating Scale
105.	NSAID	Non Steroidal Anti Inflammatory Drug
106.	NSE	Neurospecific Enolase
107.	O/E	Otoscopy Examination
108.	OGTT	Oral Glucose Tolerance Test
109.	ORS	Oral Rehydration Solution
110.	ORT	Oral Rehydration Therapy
111.	PAD	Peripheral Arterial Disease
112.	PCOS	Polycystic Ovary Syndrome
113.	PCOSQ	Polycystic Ovary Syndrome Questionnaire
114.	PCR	Polymerase Chain Reaction
115.	PEF	Peak Expiratory Flow
116.	PEFR	Peak Expiratory Flow Rate
117.	PELF	Implementation of Programme of Elimination of Lymphatic Filariasis
118.	PET	Positron Emission Tomography

119.	PHQ9	Patient Health Questionnaire-9
120.	PLAP	Placental Alkaline Phosphatase
121.	PS	Per Speculum
122.	PSA	Prostate Specific Antigen
123.	PST	Problem Solving Therapy
124.	PV	Per Vaginal
125.	PVR	Post Void Residual
126.	RAST	Radioallergosorbent Test
127.	RCT	Randomised Control Trials
128.	RIA	Radio-immunoassay
129.	RQLQ	Rhinoconjunctivitis Quality of Life Questionnaire
130.	SADQ	Severity of Alcohol Dependence Questionnaire
131.	SIBO	Small Intestinal Bacterial Overgrowth
132.	SNAP	Swanson, Nolan and Pelham
133.	SNOT	Sino-nasal Outcome Test
134.	STG	Standard Treatment Guidelines
135.	SVC	Superior Vena Cava
136.	TLCs	Therapeutic Lifestyle Changes
137.	TNM	Tumour Node Metastasis
138.	TPE	Tropical Pulmonary Eosinophillia
139.	TSH	Thyroid Stimulating Hormone
140.	TVS	Transvaginal Sonography
141.	UFS-QOL	Uterine Fibroid Symptom and Quality of Life
142.	URTI	Upper Respiratory Tract Infection
143.	USG	Ultrasonography
144.	UTI	Urinary Tract Infection
145.	VSS	Vitiligo Symptom Score
146.	WHO	World Health Organisation

INTRODUCTION

Quality and standard healthcare delivery is very important for the people of any country. To have quality control and assurance, certain set standards are required to reach the target harmonized healthcare delivery. Standard Treatment Guidelines (STGs), a systematically developed statement designed to assist practitioners and patients in making decisions about appropriate healthcare for specific clinical circumstances are one such document.

Standard Treatment Guidelines (STGs) have been in vogue in India only since recent times and are gaining popularity among practitioners, owing to uniform guidelines. They have the advantage in bringing together patients, healthcare providers, drug manufacturers and marketing agencies, and above all, the policymakers and the legislative system of the country. The drawback in STGs lies in the difficulties in their implementation on a large scale.

Homoeopathy is a holistic system of medicine wherein patients are treated with an individualistic approach. Here the treatment given to each patient is tailored according to his/her need. Quality control and assurance can be achieved by following uniform guidelines that are in consonance with the available homoeopathic literature, modern medicine, research and day-to-day practices. In pursuance to the mandate of the Ministry of AYUSH, Government of India, the Central Council for Research in Homoeopathy has taken a lead and developed standard treatment guidelines for both acute and chronic diseases.

The set of conditions included in STGs is not exhaustive; rather it is based on the conditions recommended for management and treatment in day-to-day practice. It is emphasised that the choices described here have the support of scientific evidence together with the collective opinion of a wide group of recognised experts. Recommended treatments are primarily limited to the medicines that were published in research papers, and/or conform to the opinion of experts as well as experience in homoeopathic practice. It also covers medicines enlisted in essential drug list (2012).

This document on standard treatment guidelines (STGs) is designed for use by homoeopaths at all the levels delivering health services. The guidelines can also be used by general practitioners in their private practice. The STGs are designed to be used as a guide to treatment choices and as a reference book to help in the overall management of patients, including when to refer.

The research recommendations used have been rated on the following WHO ratings:

1) Evidence rating A — requires at least one randomised control trial as part of a body of scientific literature of overall good quality and consistency addressing the specific recommendation.
2) Evidence rating B — requires the availability of well–conducted clinical studies, but no randomised clinical trials on the topic of recommendation.

3) Evidence rating C — requires evidence obtained from expert committee reports or opinions and/or clinical experience of respected authorities. This indicates an absence of directly applicable clinical studies of good quality.

The contents of these treatment guidelines will undergo a process of continuous review, for which comments or suggestions for improvement are welcome. Those comments or suggestions for addition of diseases should include evidence of prevalence as well as a draft treatment guideline using the format set out in this book.

HOW TO USE THIS BOOK?

To use these guidelines effectively, it is important that you become familiar with the contents; take time to read the book and understand the contents and layout.

The contents of this book have been arranged in an alphabetical order. Within each section, outcomes of the studies conducted both nationally and internationally have been identified. For each of these disease states, the structuring of the information and guidelines has been standardised to include a brief description of the condition or disease, common signs and symptoms, general management followed homoeopathic treatment choices and flow chart of entire condition. The book also incorporates the assessment scales used across the globe by researchers and to some extent, by physicians in their practice can also be used for making homoeopathy evidence based system of medicine.

Homoeopathic therapeutics have been suggested, which include the characteristic physical generals, mental and particular symptoms related to the disease. The pattern has been adopted to emphasize on holistic approach of homoeopathic treatment, which forms the fundamental basis of prescription.

REFERRAL

These guidelines also have provision for referral of patients to other health facilities. Patients should be referred when the prescriber is unable to manage the patient either due to lack of personal experience or availability of appropriate facilities. Patients should be referred, in accordance with agreed arrangements, where necessary diagnosis and support facilities exist. The patient should be given a letter or note indicating the problem and what has been done so far, including laboratory tests and treatment. When indicated for referral, minimal treatment must be given before the patient reaches a physician/hospital of referral.

HOMOEOPATHIC MANAGEMENT OF DISEASES

Introduction

Homoeopathy, a therapeutic system of medicine discovered by a German physician, Dr. Christian Friedrich Samuel Hahnemann (1755-1843), in the late eighteenth century based on fundamental idea of similarity (or similia) principle: Similia similibus curentur: *"let likes be treated by likes"*. This implies that substances capable of causing disorder in healthy subjects are used as medicines to treat similar patterns of disorder experienced by ill people[1]. These substances in diluted form are believed to stimulate the body's self-regulatory mechanism and a healing response in the body. The other important principles of the system include: *Law of Simplex, Law of Minimum Dose, Doctrine of Drug Proving, Theory of Chronic Diseases, Theory of Vital Force, and Doctrine of Drug Dynamization.*

Holistic concept of Health and Disease

A holistic model of health in Homoeopathy, taking an overview of the patient, including their individual mind, body and spirit, life situation and other circumstances, is central in evolving a curative approach to chronic and complex diseases. The holistic view uses the totality and the constitution of each patient to find a remedy that suits him/her, rather than just the disease. This is a paradigm shift from the conventional model of treatment approach, i.e. how illness is viewed.[2,3]

Selection of Medicine

The medicine selected for each patient is tailored to person specific, taking into consideration[4,5] his/her mental make-up, physical symptoms, and characteristic particulars etc. In case of long term illness besides the above mentioned factors, age, occupation, previous illnesses and life circumstance unique to that individual irrespective of the disease which he/she is suffering from, are taken into consideration; thus the dictum *"Homoeopathy treats the patient and not the disease".*

Some organ specific medicines with their symptoms are described for each disease along with the frequently prescribed polychrest medicines in homoeopathic management section. Person specific or individualised medicine selected based on totality of symptoms as written above is always to be emphasized for effectiveness. In advanced cases when mental symptoms are absent or paucity of totality of symptoms, these rare medicines can be given which gives relief and paves the way to surface the suppressed totality of symptoms for subsequent second prescription for annihilation of disease. But these rare medicines should always be prescribed basing on their keynote symptoms which are given for each of the medicines in this book.

---

1 WHO. Homoeopathy: Overview and analysis of clinical research. December 2006 [unpublished]

2 Fritjof Capra, The Web of Life: A New Scientific Understanding of Living Systems -1996

3 David Owen. Principles and Practice of Homeopathy. Elsevier Ltd. Churchill Livingstone.2007

4 Carlston C. Classical Homoeopathy. Philadelphia, Pennsylvania; Elsevier sciences: 2003

5 Hahnemann Samuel. Hahnemann, S. Organon of Medicine, 5 & 6 Ed. Delhi: Birla Publications, 2003

Selection of potency

After the appropriate medicine is selected, it is essential to decide the requisite potency, dose and repetition which is imperative for optimum response and faster recovery in each case. Different types of potencies such as centesimal/ decimal/ 50 millesimal potencies can be employed for treatment of both acute and chronic diseases. However, selection of potency of the remedy is dependent on various factors like susceptibility of the patient (high or low), type of disease (acute/chronic), seat/ nature and intensity of the disease, stage and duration of the disease and also the previous treatment of the disease[6]. In this context, given below are the basic rules as evolved through experience:

- *The closer the similarity a remedy bears to the picture presented by the patient, the higher is the potency, provided no specific contra-indications to the use of high potencies exist in the case.*
- *A prescription that is predominantly determined by the mental symptoms in a case, gives best results when higher potencies are employed.*
- *When prescribing for advanced pathological conditions, it is advised to begin the treatment of the case with a remedy in lower potency.*

Repetition of the remedy

The repetition of the remedy in regard to potency and dosage is almost as important as the selection of the remedy itself. The selection of the remedy can hardly be said to be finished until the potency and dosage have been decided upon. [5,7,8]

Centesimal scale

- Low potencies may be repeated frequently whereas high potencies are not to be frequently repeated.
- In acute diseases, the medicine may be repeated at very short intervals of every 24, 12, 8, 4 hours or even every 5 minutes.
- In chronic cases, the medicine may be repeated at the interval of 14, 12, 10, 8 or 7 days.
- In chronic diseases resembling acute diseases, the repetition may be made at still shorter intervals. In these cases, either repeated doses of a low potency of the remedy are given till the patient is cured or a single dose of high potency is administered followed by placebo till recovery ensues.

LM scale

- In acute diseases- every 2,3,4,6 hours
- In very urgent cases- every hour or oftener
- In long lasting diseases the medicine may be repeated daily or every second day

6 Close S. The Genius of Homeopathy: Lectures and Essays on Homeopathic Philosophy. New Delhi; B Jain Publishers : 183-211.

7 Kent JT Lectures on Homoeopathic Philosophy. Washington: North Atlantic Books;1992.

8 CCRH. Handbook on Case taking to prescribing; New Delhi; 2011.

Remedy response

After the administration of the similimum, some results are expected. Further prescription largely depends on the response of the patient to the remedy and proper interpretation of the remedy response. The remedy response can be understood in respect to: aggravation, amelioration, disappearance, no change/status quo and change in the order of the symptoms.

1. Aggravation

There are two types of aggravation, either of which may manifest. The first relates to an aggravation of the disease condition, in which the patient becomes worse. Another type of aggravation is where the symptoms of the patient are worse, but the patient feels better. Aggravation of symptoms may manifest in the following manner after the administration of a medicine:

1.1. **The aggravation is quick, short and strong with rapid improvement of the patient.**

Interpretation: The response of the patient is satisfactory. There is no much tissue change, or very superficial, if any. The potency was a bit higher. The medicine was most similar one. An aggravation of this kind is very much reassuring

Prognosis : Very good

Follow-up action : Wait and watch

1.2. **Long aggravation but final and slow improvement.**

Interpretation: After a prolonged aggravation, the patient improves slowly. This indicates the beginning of definite structural change in some organs but the disease has not progressed quite so far. The medicine was right but the potency was high. Though there have been enough tissue changes but the medicine would act for a very long time. The patient was on the borderline and had the disease condition gone further, cure would have been impossible.

Prognosis: Favorable

Follow- up action: Not to disturb till the action of the medicine has exhausted.

1.3. **A prolonged aggravation and final decline of the patient.**

Interpretation: The case is incurable since there has been enough irreversible tissue changes in the patient. The medicine prescribed may or may not have been a correct one but the potency was very high. The medicine was deep acting in nature, therefore, instead of helping it has established destruction.

Prognosis: Bad

Follow up action: It necessitates immediate anti-doting. After re-case taking a more similar medicine in low potency is to be given. Deep acting medicine and high potency should not be used in chronic and doubtful cases especially where tissue-change may have occurred.

1.4. **Some patients prove every remedy they get.**

Interpretation: Some patients are hypersensitive and have a tendency to be affected by everything, i.e they are idiosyncratic. These patients go on to prove every medicine they take and while under the influence of that medicine they are not under the influence of anything else. The medicine has its prodromal period, its period of progress and its period of decline. Such patients are good provers and are often incurable.

Prognosis: They are useful for the purpose of homoeopathic drug proving.

Follow up action: These hypersensitive patients should be given medicine in the lower potencies preferably 30th and 200th both in acute and chronic conditions.

2. Amelioration

When the symptoms are ameliorated, the physician has to observe the pattern in greater detail and note especially the sequence of events, the duration, etc. which will enable the physician to judge whether the amelioration is long lasting or due to the palliation.

2.1 **Disappearance of symptoms/no aggravation with recovery of the patient.**

Interpretation: The medicine was the most similar one and the potency exactly fitted the case. There was no organic disease or any tendency towards organic change. The trouble was only a functional disorder. This is an example of highest order of cure, mostly in acute disease conditions.

Prognosis: Very good

Follow up action: Wait and watch. Assessment to be done as per the nature of the disease. This case may not require further repetition of medicine.

2.2 **The amelioration comes first and the aggravation comes afterwards.**

Interpretation: The medicine was palliative in nature, or it was only partially/superficially similar or the patient was incurable and the remedy was somewhat suitable. In depth assessment may show that in majority of the cases the remedy was only similar to the most grievous symptoms and did not cover the whole case.

Prognosis: Bad

Follow up action: A more similar medicine is to be given after re-casetaking.

2.3 **Too short relief of the symptoms.**

Interpretation:

A) In acute diseases:

1. High grade inflammatory action is present. The organs are threatened by the rapid processes going on. The infection is violent/virulent in nature.

B) In chronic diseases :

1. The medicine was partially similar, or
2. There is a condition which interferes with the action of the remedy, or
3. Structural changes have occurred, or organs are destroyed or are in very precarious condition.

Prognosis: Very bad (especially in chronic diseases)

Follow up action: Medicine complementary to the first prescription should be prescribed in acute conditions.

A more similar medicine is to be found out and given in a chronic condition or if the patient is incurable, the subsequent medicine should be of palliative nature.

2.4 **A full time amelioration of the symptoms, yet no special relief of the patient.**

Interpretation: There are latent conditions (existing organic conditions) in a few patients that prevent improvement beyond a certain limit. For example, a patient with one kidney or bigger part of the lungs having been calcified / fibrosis. Hence the patient is curable only to a certain limit. Suitable palliation has been brought about by the homoeopathic remedies.

Prognosis: Bad

Follow up action: Palliative medicine should be prescribed.

3. No Change / Status Quo

Interpretation: When no change is observable in the symptomatology in a patient, even after waiting for an adequate period of time and a careful re-evaluation reveals no error in the previously administered remedy, the inference may be drawn that the susceptibility of the patient was not such as to be favourably affected by either the number of doses administered or the potency selected.

Prognosis: Cannot be predicted definitely unless right remedy with proper dosage is administered

Follow up action: Intercurrent medicine may be prescribed.

4. Change of Symptoms

4.1 **New symptoms appearing after the remedy.**

Interpretation: The medicine was wrong. Greater number of such symptoms indicates towards a dissimilar selection of medicine.

Prognosis: Bad

Follow up action: If the symptoms are not of serious nature we should wait till the new symptoms pass off and the patient settles down to original state. After re-case taking a more similar medicine is to be given. If the symptoms are of serious nature and threatening it has to be antidoted.

4.2 **Old symptoms are observed to reappear.**

Interpretation: The medicine has been very right. Appearance of old symptoms indicates that the patient is curable.

Prognosis: Good.

Follow up action: The action of the medicine should not be disturbed. Only if the reestablished symptom/discharge/eruption stays for pretty long time, the medicine may be repeated. Here old symptoms/diseases may come and go in the reverse order of their appearance. (Following Hering's Law of Cure)

4.3 **Symptoms take the wrong direction.**

Interpretation: When the symptoms go from periphery to the centre, the remedy administered was a wrong one.

Prognosis: Very bad.

Follow up action: It has to be antidoted at once. A more similar remedy has to be found out and given.

Inspite of the best efforts in any disease condition, if a favorable response to the treatment is not achieved, it is advised to refer the case as per the guidelines given in STGs for individual disease.

Advantages of Homoeopathy

- Treatment with homoeopathic medicines is safe, effective and based upon natural substances. With the use of single simple substance in micro-doses, medicines are not associated with any toxicological effect and can be safely used for pregnant women and lactating mothers, infants and children and in the geriatric population.
- Medicines, instead of having a direct action on the micro-organisms, act on the human system (self-protective) to fight disease process. As such, no microbial resistance is known to develop against homoeopathic drugs.
- The mode of administration of medicines is easy. There are no invasive methods and medicines are highly palatable, thereby enhancing treatment compliance.
- Lack of diagnosis is not a hindrance for initiating treatment with homoeopathic medicines.
- Individualized approach for treatment which is the mainstay in Homoeopathy is in consonance with increasing need for customized treatment, being realized in the modern era.
- Homoeopathic remedies are non-addictive and once relief occurs, the patient can easily stop taking them.
- Treatment is cost-effective.

Chapter 1

ACUTE OTITIS MEDIA

ACUTE OTITIS MEDIA

CASE DEFINITION

Acute otitis media (AOM) is defined as the presence of inflammation in the middle ear accompanied by the rapid onset of signs and symptoms of an ear infection.[1]

INCIDENCE/PREVALENCE

- AOM incidence rate is 10.85% i.e., 709 million cases each year with 51% of these occurring in under-fives.[2]
- The clinic-prevalence of AOM is 35% annually with peaks reported in July and December.[3]
- By the age of 5 years, 80% of all children would have suffered from at least one episode of AOM.
- Otitis media is the cause of nearly 20% of all hearing loss.[4]

AETIOLOGY

Typically, the disease follows the viral infection of the upper respiratory tract but soon the pyogenic organisms invade the middle ear. Most common organisms responsible for the disease in infants and young children are Streptococcus pneumoniae (30%), Haemophilusinfluenzae (20%) and Moraxella catarrhalis (12%). Other organisms include Streptococcus pyogenes, Staphylococcus aureus and sometimes Pseudomonas aeruginosa.[5]

ROUTE OF INFECTION[5]

- *Via eustachian tube*: most common route;infection travels via the lumen of the tube or along subepithelial peritubal lymphatics. Eustachian tube in infants and younger children is shorter, wider and more horizontal so it may account for higher incidence of infection.
- *Via external ear:* perforation of tympanic membrane due to any cause open a route to middle ear infection.
- *Blood-borne:* uncommon route.

RISK FACTORS [3,6]

- Frequent upper respiratory tract infection
- Prolonged bottle use
- Nasal allergy

---

1 British Columbia Medical Association. Otitis Media: Acute Otitis Media (AOM) & Otitis Media Effusion (OME). Guidelines & Protocols Advisory Committee 2010[cited 2015 April 5]. Available from: www2.gov.bc.ca/assests/gov/content/health/practitioner-pro/bc-guidelines/otitis.pdf.

2 Monasta L, Ronfani L, Marchetti F, Montico M, VecchiBrumatti L, Bavcar A, Grasso D, Barbiero C, Tamburlini G. Burden of disease caused by otitis media: systematic review and global estimates. PLoS One. 2012;7(4): e36226.

3 D'silva L, Parikh R, Nanivadekar A, Joglekar S. Survey of Indian pediatricians: Clinic-prevalence, diagnostic and management strategies for acute otitis media. Pediatric Infectious Disease.2013;5 (4): 165 – 71.

4 Deshmukh CT. Acute otitis media in children-treatment options. Journal of Post Graduate Medicine 1998:44(3): 81-4.

5 Dhingra PL & S. Diseases of Ear, Nose and Throat.5th ed.New Delhi: Elsevier; 2010: 69.

- Recurrent ear infection in siblings
- Day care attendance outside home
- Genetic predisposition
- Cleft palate
- Exposure to smoking.

DIAGNOSIS[1,3,4,7]

Clinical presentation

- Ear pain (otalgia)
- Irritability/excessive crying
- Fever
- Sensation of fullness in the ear
- Cough
- Vomiting
- Loss of hearing
- Rubbing or holding of the ears with crying
- Other complaints: increased pulse rate, malaise, disturbed sleep, loss of appetite, cold symptoms, night waking; child becomes less playful or active and occasional balance problems.

Otoscopy findings[1]

- Opaque, bulging of ear drum
- Inflammation /redness of tympanic membrane
- Reduced or absent mobility of tympanic membrane
- loss of landmarks of tympanic membrane.

Note : Although pneumatic otoscopyis helpful in the diagnosis of AOM, it is not routinely performed as it may elicit severe pain.

Natural history and stages of AOM[5,8]

Spontaneous recovery from recurrent acute otitis media is common with increasing age.[9] AOM

6 Uhari M, Mäntysaari K, Niemelä M. A Meta-analytic review of the risk factors for acute otitis media. Clin Infect Dis. 1996; 22(6):1079-83.

7 Kliegman RM, Behrman RE, Jenson HB, Stanton BF, Nelson Textbook of Pediatrics. 18th ed.Vol.2. NewDelhi: Elsevier;2010: 2633-34.

8 Government of India. Standard Treatment Guidelines and Medical Management & Costing of Select Conditions; AFMC In Collaboration with Ministry of Health & Family Welfare Government of India & WHO Country Office. India: Armed Forces Medical College, Pune; 2007: 103-4.

9 Alho OP, Laara E, Oja H. What is the natural history of recurrent acute otitis media in infancy?. The Journal of Family Practice. 1996; 43(3):258-64.

symptoms improve within 24 hours without antibiotics in 61% of children, rising to 80% by 2 to 3 days.[10] However, the disease runs through following stages:

(I) Stage of tubal occlusion: This is due to inflammatory occlusion of the eustachian tube. Patient has a feeling of ear blockage, pain, hearing loss and associated symptoms. Pain may also be referred to the throat or teeth. There is generally no fever.

O/E: The tympanic membrane is congested and retracted. A pneumatic otoscopy can induce an aggravation of the pain. Tuning fork tests demonstrate a mildto moderate conductive hearing loss.

(II) Stage of pre-suppuration : This stage occurs following exudation into the middle ear cleft and gradually starts pushing the tympanic membrane outwards. The intensity of pain and systemic symptoms increases as does hearing loss. Usually, child runs high degree of fever and is restless.

O/E : The tympanic membrane is seen grossly congested with loss of landmarks.

(III) Stage of suppuration : As the inflammatory process proceeds, the exudative fluid becomes purulent in nature with polymorphs. The pain at this stage is excruciating. Deafness increases, child may run fever of 102-103°F. This may be accompanied by vomiting and convulsion.

O/E : Otoscopy shows a bulging tympanic membrane and often a pointing may be appreciated. Sometimes a fluid level behind the membrane may be seen.

(IV) Stage of resolution : At this stage, if the inflammation persists, the tympanic membrane may rupture at its weakest part and the purulent discharge comes out from this perforation into the external auditory canal. The patient would now present with muco-purulent ear discharge which may be initially blood stained. The otalgia reduces and resolution of symptoms may occur.

(V) Stage of complication : If tympanic membrane does not rupture and the inflammation continues, stage of complication occurs. The importance of the first attack of AOM in young children lies in the fact that subsequent long-lasting dysfunction of the eustachian tube may lead to chronic serous otitis media (Glue ear). These complications may range from intra-temporal like mastoid abscess, facial nerve palsy, and labyrinthitis to intra-cranial complications like extra-dural abscess, meningitis, sub-dural abscess, brain abscess etc. The patient's general condition worsens and increasing fever and otalgia are indicative of emergence of complications. In this stage imaging modalities are required to further diagnose and treat. These are also known to progress to chronic phase and can affect the bones of the middle ear and hence cause hearing deficit.

INVESTIGATIONS[7]

The diagnosis is essentially clinical, and no investigations are required.

DIFFERENTIAL DIAGNOSIS[8]

Differential diagnosis includes any condition having otalgia. Common ones include:

- Otitis externa
- Furunculosis

10 Rosenfeld RM, Kay D. Natural history of untreated otitis media. The Laryngoscope. 2003; 113(10): 1645–57.

- Impacted wax
- Foreign body in the external ear canal
- Conditions causing referred otalgia,i.e.,oropharyngeal and dental infections.

EVALUATION AND ASSESSMENT

- AOM-SOS scale[11]
- Tympanic membrane examination

COMPLICATIONS[12]

Intratemporal complications	Intracranial complications
• Hearing loss (conductive and sensorineural) • TM perforation (acute and chronic) • Chronic suppurative otitis media (with or without cholesteatoma) • Cholesteatoma • Tympanosclerosis • Mastoiditis • Petrositis • Labyrinthitis • Facial paralysis • Cholesterol granuloma • Infectious eczematoid dermatitis	• Meningitis • Subdural empyema • Brain abscess • Extradural abscess • Lateral sinus thrombosis • Otitic hydrocephalus

REDFLAGS[8]

- No change or progress of otalgia.
- Worsening of general condition.
- Evidence of complications like headache, vomiting, vertigo, mastoid abscess etc.

PREVENTION[4]

- Washing hands frequently is the single most important thing that can prevent AOM.
- Prolonged and proper breast feeding protects the infant from chronic otitis media and is known to reduce H. Influenzae infections.

11 Shaikh N, Hoberman A, Paradise JL, Rockette HE, Kurs-Lasky M, Colborn DK, et al. Responsiveness and construct validity of a symptom scale for acute otitis media.Pediatr Infect Dis J. 2009;28(1):9-12.

12 Danishyar A, Ashurst JV. Acute Otitis Media. [Updated 2022 Jan 21]. In: Stat Pearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan. Available from: https://www.ncbi.nlm.nih.gov/books/NBK470332/

- If the child is bottle-fed, then he/she should be fed in upright position.
- Avoiding exposure to tobacco smoke (passive smoking).

MANAGEMENT

General management

General management has its role to play in treatment of AOM in children. In combination with therapeutic treatment and general management, the duration of suffering can be reduced. Counselling should be given to the parents of the patients regarding avoidable risk factors which are as follows:

- To motivate the lactating mothers for adopting the correct method of breast feeding and burping after meals to infants.
- To avoid putting baby down for a nap during the suffering.
- To avoid exposing baby to passive cigarette smoke.
- Do not allow sick children to spend time together.
- To keep the ears dry and not to instilled anything into the ear.
- The elderly patient should be advised not to blow the nose and to wash hands frequently.
- To undergo steam inhalation.

Homoeopathic management

Clinical research in homoeopathy suggests that over the counter homoeopathic medicines offer pragmatic treatment alternatives to conventional drugs for symptom relief in children suffering from uncomplicated AOM.[13] Numerous clinical studies demonstrate that homeopathy accelerates early symptom relief in acute illnesses at much lower risk than conventional drug approaches. Evidence-based[13-20] advantages for homoeopathy include lower antibiotic fill rates during watchful waiting in otitis media, fewer and less serious side effects, absence of drug-drug interactions, and reduced parental sick leave from work.

In homoeopathic Synthesis Repertory approximately 67 medicines[21] have been given under the rubric "Ear-Inflammation-media (=otitis media)". The following are few commonly prescribed

13 Bell IR. Homeopathic Medications as Clinical Alternatives for Symptomatic Care of Acute Otitis Media and Upper Respiratory Infections in Children. Glob Adv Health Medicine. 2013;2(1):32-43.

14 Jacobs J, Springer DA, Crothers D; Homeopathic treatment of acute otitis media in children: a preliminary randomisedplacebo controlled trial. Pediatric Infect Dis. J. 2001;20(2): 177-83.

15 Friese KH, Kruse S, Lüdtke R, Moeller H.The homoeopathic treatment of otitis media in childrencomparisons with conventional therapy. Int J ClinPharmacolTher. 1997;35(7):296-301.

16 Frei H, Thurneysen A. Homeopathy in acute otitis media in children: treatment effect or spontaneous resolution?. Br Homeopath J. 2001;90(4):180-2.

17 Fixsen A. Should homeopathy be considered as part of a treatment strategy for otitis media with effusion in children?. Homeopathy. 2013;102(2):145-50.

18 Sinha MN, Siddiqui VA, Nayak C, Singh V, Dixit R, Dewan D, Mishra A. Randomized controlled pilot study to compare Homeopathy and Conventional therapy in Acute Otitis Media. Homeopathy. 2012;101(1):5-12.

19 Sharma P,Aggarwal T & Kar S. Study of 20 Cases of Otitis Media Successfully Treated with Homoeopathic Medicines-A Case Series. Homoeopathic Links.2021(33). 309-317.

20 Taylor JA, Jacobs J. Homeopathic Ear Drops as an Adjunct in Reducing Antibiotic Usage in Children With Acute Otitis Media. Glob Pediatr Health. 2014; 1:2333794X14559395.

21 Schroyens F. Synthesis Repertory. RADAR Repertory Program. Treasure edition. New Delhi: B. Jain Publishers; 2007.

medicines for acute otitis media with their indications, enlisted from experiences, research papers and textbooks.[22-25] The frequently verified characteristic features of some organospecific remedies are: ***Mercurius dulcis***: Otitis media; closure of the eustachian tube; ear problems in scrofulous children; membrana tympani retracted, thickened & immovable. ***Kalium muriaticum***: Catarrhal affections & sub-acute inflammatory states, glands around the ear swollen. Snapping & noises in the ear. ***Tellurium metallicum***: Catarrh of the middle ear, discharge acrid, smells like fish pickle. Itching, swelling, throbbing in the meatus.

The list of frequently prescribed polychrest medicines with their indications are given below:

Medicines	General indications	Characteristic particulars
Belladonna	*Sudden, violent effects; dryness; bright redness; burning heat; throbbing pains, appear and disappear suddenly; wildly delirious, restless, sensitive, nervous; child jovial and entertaining when well but violent when sick; thirstless; right - sided complaints*	• Causation: from washing hair, uncoverin head, becoming overheated • Throbbing and tearing pain, deep in the ear. • Tympanic membrane red and bulging • Pain causes delirium • Child cries out in sleep • Worse: from touch,motion,noise, night, after midnight, lying down • Better : rest, wrapping up, pressure, warm room
Chamomilla	*Hot patient, sensitive, irritable, and thirsty for cold drinks.; tongue covered with thick, yellowish coating; nervous, excitable; uncivil; peevish, irritable and oversensitive to pain quiet only when carried; wants many things and become angry when refused, or rejects when offered, mental calmness contraindicates Chamomilla*	• Causation: complaints after anger (fever, pains) • Ringing in ears • Earache with soreness, swelling & heat driving patient frantic • Stitching pain, ears feels stopped frantic • Stitching pain, ears feels stopped • Won't tolerate being examined or touched • Pain with numbness • Worse: night, touch, wind

22 Boericke W. Boericke's New Manual of Homoeopathic Materia Medica with Repertory: Third Revised & Augmented Edition based on Ninth Edition. New Delhi: B. Jain Publishers; 2007.

23 Allen HC. Allen's Keynotes- Rearranged and classified with leading remedies of the Materia Medica and bowel nosodes. 10th Reprint edition. New Delhi: B. Jain Publishers ;2006.

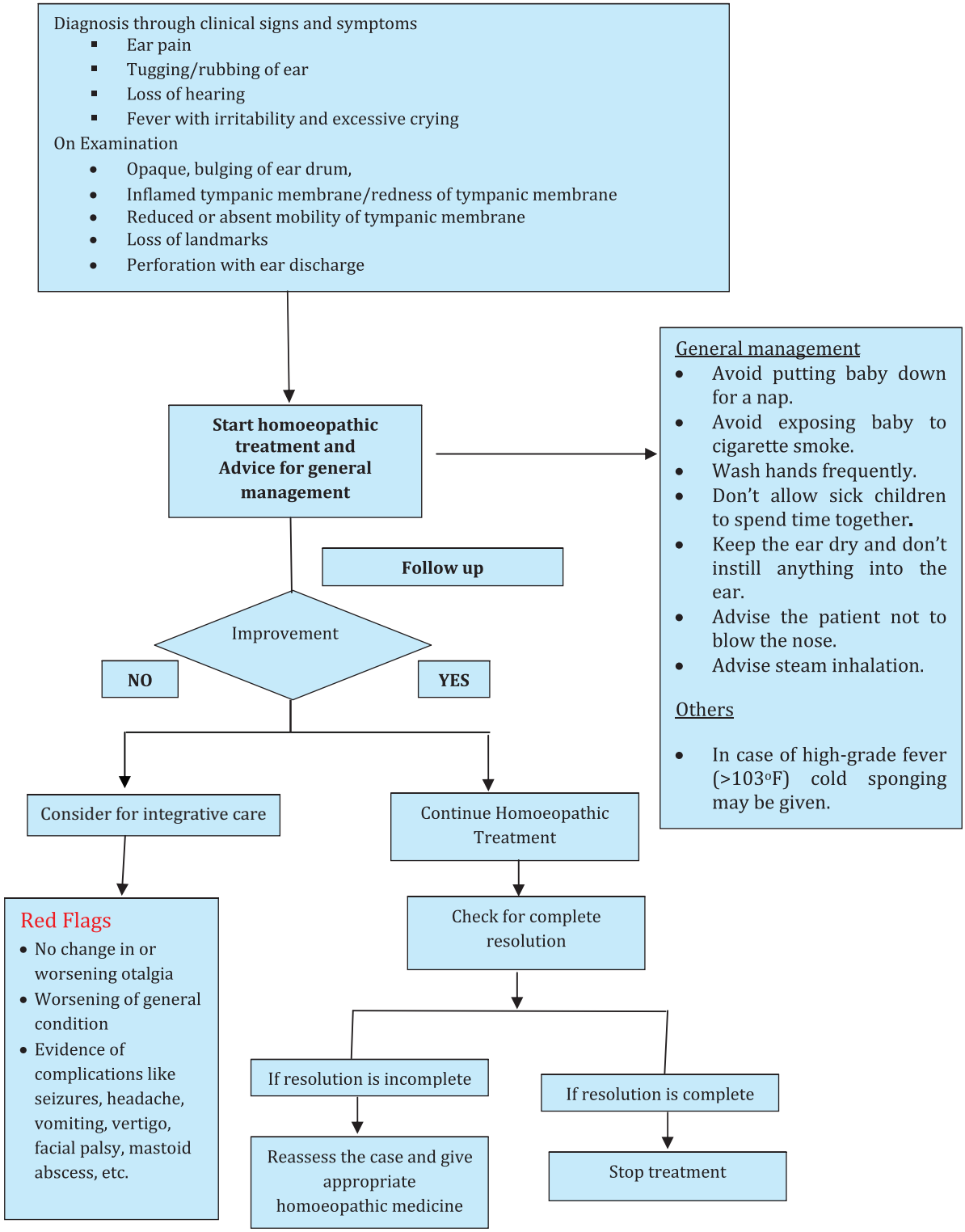
24 Clarke JH. A Dictionary of Practical Materia Medica, Vol-3.Reprint ed. New Delhi: B. Jain Publishers;2006.

25 Vermulen F. Concordant Materia Medica. New Delhi:Indian Book & Periodicals Publishers;2001.

Medicines	General indications	Characteristic particulars
Pulsatilla nigricans	*Hot patient; marked changeability of symptoms; aversion to fatty food, warm food and drink, dislikes butter; thirstless with great dryness of mouth; tongue coated yellow or whitish; pains appear suddenly, leave gradually; desire for company, mild, gentle, affectionate, yielding, weeping disposition*	• Prescribed in all stages of acute otitis media, In the IVth stage (suppurative stage) of disease condition, discharges are thick, bland and have offensive odour • Catarrhal deafness; hearing difficult as if ears are stuffed • Worse: evening and night and involves whole side of head and face • Better: cold application, from open air, motion
Sulphur	*Hot patient, kicks off the cloth at night; dirty, filthy, does not want to be washed; lean, thin, stoop - shouldered; child who walks and sit stooping; red orifices; desires sweets; when the best selected remedy fails to improve*	• Bad effects from suppression of an otorrhoea • Catarrhal deafness • Sharp pain, worse on left side • Itching in ears, changing to pain when attempting to scratch them • Discharges dirty offensive, sometimes sour smelling pus flowing from ears; children averse to having them washed • Worse: heat of bed, night
Calcarea carbonica	*Chilly patient; takes cold easily; fat, fair, flabby children with large head, distended abdomen; pale, weak, easily tired; head sweats profusely while sleeping; sour smelling discharges; longing for fresh air; desire for eggs and indigestible things, aversion to meat and milk; fearful, shy, timid, slow and sluggish*	• Sensitive to cold about ear and neck • Throbbing ear pain, hardness of hearing and heat in the ears with or without enlarged cervical lymph nodes • Deafness from eustachian catarrhs. In the IVth stage (suppurative stage) of disease condition, the discharge is muco - purulent, occasionally offensive

Medicines	General indications	Characteristic particulars
Mercurius solubilis	*Sensitive to changes of temperature; lax musculature; profuse offensive perspiration; tongue flabby with imprints of teeth; increased salivation; worse at night; in wet damp weather; weak memory, fearful, shy, hurried, violent, impulsive, nervous, irresolute*	• Acute otitis media especially with swelling of parotid glands and offensive breath • Shooting pains in ears extending to face; ears feel stopped and swollen • In the IVth stage (suppurative stage) with middle ear affection, bloody otorrhoea, offensive discharge, with stabbing pain • Worse: becoming heated in bed night both heat and cold
Silicea terra	*Extreme chilly patient; all symptoms worse by cold except stomach complaints, which are ameliorated; profuse, offensive discharges; sweat profusely especially on feet; easy suppuration; glandular affinity; large head and distended abdomen, weak ankles; slow in learning to walk; constipation, stool being partly expelled recedes back again; obstinate, headstrong, cries when spoken kindly to, nervous, apprehensive, oversensitive, irritable and fearful*	• Foetid discharge • Mild pain in the ear(s), generally no fever • If progress is protracted, purulent otorrhoea occurs
Hepar sulphuris calcareum	*Extremely chilly patient; hypersensitive (to cold, pain), faints easily; scrawny; glandular constitution; sweats easily; worse in dry, cold air, better in damp weather; quick, hasty speech and drinking; irritable, difficult to please*	• Darting and shooting pain in the ears. Great soreness and sensitiveness to the slightest touch • Acute suppurative otitis media; discharge thick, creamy and somewhat offensive • Worse: dry, cold air • Better: rest and wrapping head

ALGORITHM OF TREATMENT PROCESS FOR ACUTE OTITIS MEDIA


Diagnosis through clinical signs and symptoms
Ear pain
Tugging/rubbing of ear
Loss of hearing
Fever with irritability and excessive crying
On Examination
Opaque, bulging of ear drum,
Inflamed tympanic membrane/redness of tympanic membrane
Reduced or absent mobility of tympanic membrane
Loss of landmarks
Perforation with ear discharge
Start homoeopathic treatment and Advice for general management
General management
Avoid putting baby down for a nap.
Avoid exposing baby to cigarette smoke.
Wash hands frequently.
Don't allow sick children to spend time together.
Keep the ear dry and don't instill anything into the ear.
Advise the patient not to blow the nose.
Advise steam inhalation.
Others
In case of high-grade fever (>103°F) cold sponging may be given.
Follow up
Improvement
NO
YES
Consider for integrative care
Continue Homoeopathic Treatment
Red Flags
No change in or worsening otalgia
Worsening of general condition
Evidence of complications like seizures, headache, vomiting, vertigo, facial palsy, mastoid abscess, etc.
Check for complete resolution
If resolution is incomplete
If resolution is complete
Reassess the case and give appropriate homoeopathic medicine
Stop treatment

Chapter 2

ATTENTION DEFICIT HYPERACTIVITY DISORDER

ATTENTION DEFICIT HYPERACTIVITY DISORDER

CASE DEFINITION[1]

Attention Deficit Hyperactivity Disorder (ADHD) is a chronic condition usually starting from childhood (first five years of life). It is characterized by in-attention, poor concentration and hyperactivity or impulsivity that interferes with functioning at home, school and social relationships. The symptoms of ADHD must be present most of the time and in at least 2 different settings, for example, at home and school. The child must have these symptoms for at least 6 months and they must be more prominent than others of their age for a doctor to consider the diagnosis.

INCIDENCE/PREVALENCE

- The prevalence of ADHD in India has increased from 5.2% (2003)[2] to 11.32% (2011).[3]
- In approximately 80% of children with ADHD, symptoms persist into adolescence and may even continue into adulthood.[4]
- Children and adolescents in the age group of 4-18 years are the sufferers of the condition. It is more common in males than in females.

AETIOLOGY/RISK FACTORS[5]

The etiology is unknown, however following causes may play a role in development of the disorder.

- **Genetic:** certain genes and neurotransmitters are responsible for its occurrence and plays a major role in the development of ADHD and may run in family.
- **Environmental factors:** substance use and abuse (cigarettes, alcohol etc.) during pregnancy, exposure to high levels of lead.
- **Brain injuries:** in children, during pregnancy, delivery or immediately after birth.
- **Others:** Premature delivery and low birth weight, consumption of certain food additives like artificial colors or preservatives, and sugar.

DIAGNOSIS

ADHD can be identified on the following symptoms:

- Easily distracted
- May not follow instructions or listen when spoken to
- Leaves tasks unfinished

---

1 World Health Organization. ICD-10, International statistical classification of Diseases and Health related problems, 10th revised ed. : Geneva: World Health Organization; 2004.

2 Connor DF. Preschool Attention Deficit Hyperactivity Disorder: A Review of Prevalence, Diagnosis, Neurobiology, and Stimulant Treatment. J Dev Behav Pediatr. 2002; 23 (S1): S1-S9.

3 Venkata JA, Panicker AS. Prevalence of Attention Deficit Hyperactivity Disorder in primary school children. Indian J Psychiatry. 2013; 55(4): 338–42.

4 Faraone SV, Sergeant J, Gillberg C, Biederman J. The worldwide prevalence of ADHD: is it an American condition? World Psychiatry. 2003; 2(2): 104–13.

5 National Institute of Mental Health (NIMH). Attention Deficit Hyperactivity Disorder (ADHD). NIMH. 2015. [cited 11 July 2015]. Available from: http://www.nimh.nih.gov/health/topics/attention-deficit-hyperactivity-disorder-adhd/index.shtml

- Makes careless mistakes
- Have trouble sitting still and run around at inappropriate times
- Tend to be clumsy and occasionally destructive

Diagnosis of ADHD as per Diagnostic Statistical Manual of Mental Disorders V (DSM V) criteria covers the following:[6,7]

1. **Inattention:** Six or more symptoms of inattention for children up to age 16, five or more for adolescents up to 17 and older and adults; symptoms of inattention have been present for at least 6 months, and they are inappropriate for developmental level:
   1. Often fails to give close attention to details or makes careless mistakes in schoolwork, at work, or with other activities.
   2. Often has trouble holding attention on tasks or play activities.
   3. Often does not seem to listen when spoken to directly.
   4. Often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (e.g., loses focus, side-tracked).
   5. Often has trouble organizing tasks and activities.
   6. Often avoids, dislikes, or is reluctant to do tasks that require mental effort over a long period of time (such as schoolwork or homework).
   7. Often loses things necessary for tasks and activities (e.g., school materials, pencils, books, tools, wallets, keys, paperwork, eyeglasses, mobile telephones).
   8. Is often easily distracted.
   9. Is often forgetful in daily activities.
2. **Hyperactivity and Impulsivity:** Six or more symptoms of hyperactivity-impulsivity for children up to age 16, or five or more for adolescents 17 and older and adults; symptoms of hyperactivity-impulsivity have been present for at least 6 months to an extent that is disruptive and inappropriate for the person's developmental level:
   1. Often fidgets with or taps hands or feet, or squirms in seat.
   2. Often leaves seat in situations when remaining seated is expected.
   3. Often runs about or climbs in situations where it is not appropriate (adolescents or adults may be limited to feeling restless).
   4. Often unable to play or take part in leisure activities quietly.
   5. Is often "on the go" acting as if "driven by a motor".
   6. Often talks excessively.
   7. Often blurts out an answer before a question has been completed.
   8. Often has trouble waiting his/her turn.
   9. Often interrupts or intrudes on others (e.g., butts into conversations or games)

6 American Psychiatric Association. Diagnostic and statistical manual of mental disorders. Washington (DC): American Psychiatric Association. 2000. [cited 11 July 2015] Available from: http://www.dsm5.org/Documents/ADHD%20Fact%20Sheet.pdf.

7 American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders, 5th edition. Arlington, VA: American Psychiatric Association; 2013. [cited31 Mar 2016]. Available from: http://www.cdc.gov/ncbddd/adhd/diagnosis.html

Subtypes of ADHD[7]

1. **Predominantly hyperactive -impulsive:** if enough symptoms of hyperactivity-impulsivity were present for the past 6 months.
2. **Predominantly inattentive:** if enough symptoms of inattention, but not hyperactivity-impulsivity, were present for the past six months.
3. **Combined hyperactive-impulsive and inattentive:** if enough symptoms of both criteria inattention and hyperactivity-impulsivity were present for the past 6 months.

COMORBIDITIES OF ADHD[5,8]

About 50 % of children with ADHD have associated behavioural disorders and chances of comorbidity increases with age. The comorbidities are as follows:

1. **Learning disability:** Children with specific learning disorder may appear inattentive because of many factors like inability to read, write certain things and find it difficult to comprehend.
2. **Oppositional defiant disorder:** Children will not obey any command that comes from authority and they will have strong negativity, hostility and defiant behaviour.
3. **Conduct disorder:** Child often harbours resentment towards family members and goes on reacting for every action. This condition includes behaviours in which the child may lie, steal, fight, or bully others. These children or teens are also at a higher risk of using illegal substances.
4. **Anxiety and depression:** Inability to perform in the expected way, produces lot of emotional responses or expressions in the individual ranging from anxiety to depression. He may exhibit this with certain emotional/ physical responses and goes in to vicious cycle of unproductive activity.
5. **Bipolar disorder:** Some children with ADHD may also have this condition in which extreme mood swings go from mania (an extremely high elevated mood) to depression in short periods of time.
6. **Tourette syndrome:** Very few children have this brain disorder, but among those who do, many also have ADHD. Some people with Tourette syndrome have nervous tics and repetitive mannerisms, such as eye blinks, facial twitches, or grimacing, clear their throats, snort, or sniff frequently, or bark out words inappropriately.

DIFFERENTIAL DIAGNOSIS[9]

Disorder	Differentiating features from ADHD
Oppositional Defiant and Conduct Disorders	• Defies initial direction, but once engaged in a task is able to persist (sustain attention) • Lacks hyperactive/impulsive behaviors • Behavioral problems most acute in the home (defiance often)
Learning Disorders	• Symptoms are specific to academic setting and/or subjects (e.g., reading groups) • Lacks early history of hyperactivity and problems associated with impulsivity (e.g., no aggression and/or disruption)

8 Harpin V A. The effect of ADHD on the life of an individual, their family, and community from preschool to adult life. Arch Dis Child. 2005;90(Suppl I): i2–7.

9 Canadian ADHD Resource Alliance. Differential Diagnosis and Comorbid Disorders. Ontario. Canada. Canadian ADHD Resource Alliance. 2013. [Cited 11 July 2015]. Available from: http://www.caddra.ca/pdfs/caddraGuidelines2011Chapter02.pdf.

Disorder	Differentiating features from ADHD
Anxiety and Mood Disorders	• Problems with focused (not sustained) attention • Over inhibited (not impulsive). School adjustment typically does not include disruptive behavior or teacher concerns regarding hyperactivity, impulsivity or inattention
Thought Disorders	• Early school adjustment typically does not include disruptive behavior or teacher concerns regarding hyperactivity, impulsivity or inattention • Poor reality contact
Bipolar Disorder	• Severe and persistent irritability and/or elated mood • Temper outbursts that can become severe (e.g., destructive or violent) • Grandiosity
Pervasive Developmental Disorder (autism)	• Distractible inattention related to internal (not external) stimuli • Deterioration in attention and vigilance over time not as pronounced
Mental Retardation	• Relative to developmental level, attention span not severely impaired • Relative to developmental level, activity level considered appropriate
Substance-Related Disorder	• Acute symptom onset after 7 years of age
Other Substance-Related Disorder	• Symptoms related to the use of medication (e.g., bronchodilators, isoniazid, akathisa from neuroleptics)

PREVENTION[10]

These initiatives will not eradicate ADHD, but they may lower incidence rates.

Primary preventive measures:

1. Initiatives to reduce or avoid exposure to environmental toxins, such as lead and mercury.
2. Promote maternal health during pregnancy, such as warnings against alcohol and cigarette use.
3. Reduce or avoid exposure to head injury during pregnancy and in infants, toddlers and children.
4. Consumption of certain food additives like artificial colors or preservatives, and sugar can be avoided.

Secondary preventive measures:

1. Identify hyperactivity and impulsivity in children which are evident during the pre-school years as they go on to develop the disorder.
2. Engage children in challenging and cognitively stimulating games that are growth-promoting.

Tertiary preventive measures: Manage or limit consequences after the disorder has manifested by advising behavior therapy and brain stimulating activities and learning.

10 Halperin JM, Bédard AV, Curchack-Lichtin JT. Preventive Interventions for ADHD: A Neurodevelopmental Perspective. Neurotherapeutics. 2012; 9(3):531–41.

EVALUATION AND ASSESSMENT[11,12,13,14]

For quantitative assessment of the patient at interactive follow-up any of the following scales mentioned below can be used :

- Swanson, Nolan, and Pelham Rating Scale (SNAP-IV)
- Conners Parent Rating Scale Revised (CPRS-R)
- Conners Teacher Rating Scale Y Revised (CTRS-R)
- Conners Wells Adolescent Self-Report Scale
- Vanderbilt ADHD Diagnostic Parent and Teacher Scales

RED FLAGS/REFERRAL[L9,15]

1. Intellectual disability (mental retardation)
2. Developmental disorder (e.g., speech or motor delay)
3. Visual or hearing impairment
4. History of abuse (alcohol/drug)
5. Mental health disorders (Severe aggression/ Depression/ anxiety)
6. Seizure disorder
7. Children who continue to have problems in functioning despite treatment

MANAGEMENT

General management[16]

Together with calmness, patience, equanimity, and consistency, the following points deserve special attention:

- Avoid a reproachful tone; more can be achieved with decisiveness and humour.
- Do not apply pressure to perform – the result is better achievement.
- Lighten work and tasks with plenty of breaks.
- Prevent arguments by setting clear rules and boundaries.
- Both parties should honour common agreements.
- Promote self-responsibility and accountability in a spirit of freedom since telling others what to do generates much resistance.

11 Pliszka S. Practice parameter for the assessment and treatment of children and adolescents with attention-deficit/hyperactivity disorder. J Am Acad Child Adolesc Psychiatry. 2007;46(7):894-921.

12 Hall CL, Guo B, Valentine AZ, Groom MJ, Daley D, Sayal K, Hollis C. The Validity of the SNAP-IV in Children Displaying ADHD Symptoms. Assessment. 2020;27(6):1258-1271.

13 Conners CK, Sitarenios G, Parker JD, Epstein JN. The revised Conners' Parent Rating Scale (CPRS-R): factor structure, reliability, and criterion validity. J Abnorm Child Psychol. 1998;26(4):257-68.

14 Conners CK, Sitarenios G, Parker JD, Epstein JN. Revision and restandardization of the Conners Teacher Rating Scale (CTRS-R): factor structure, reliability, and criterion validity. J Abnorm Child Psychol. 1998;26(4):279-91.

15 American Academy of Child & Adolescent Psychiatry and American Psychiatric Association. ADHD. Parents Medication Guide. Revised July 2013.1-45. [Cited 11 July 2015]. Available from: https://www.aacap.org/App_Themes/AACAP/docs/resource_centers/resources/med_guides/ADHD_Medication_Guide-web.pdf

16 Wolraich M, BrownL, Brown RT, DuPaul G, Earls M, Feldman HM, et al. ADHD: Clinical Practice Guideline for the Diagnosis, Evaluation, and Treatment of Attention-Deficit/ Hyperactivity Disorder in Children and Adolescents. Pediatrics. 2011; 128(5):1007-22.

- Foster mutual respect to achieve long-term improvement.
- Offer recognition and praise at every opportunity.
- Set a good example with positive behavior.
- ADHD/ADD children should be able to spend at least one hour a day exercising outside in the fresh air. Preoccupation with electronic media such as laptops, TV, smartphones, gaming devices and so on should be kept to a minimum.
- Judo, karate, aikido and other Asian martial arts encourage the development of optimal self-control, body control and body perception. They are especially recommended for patients with ADHD/ADD.
- Professional help: Parenting of these children can often only be accomplished with professional help. The first and very significant treatment option for young children should therefore be counselling of the parents in parenting. This can be obtained from parental counselling centers, child psychologists, child psychiatrists or paediatricians with the necessary training. Remedial teachers can also provide important support for the child and parents.

Homoeopathic management

Several research studies[17-30] have been done which reflect positivity of homoeopathy in managing ADHD.

Homoeopathic armamentarium (Synthesis Repertory)[31] has 384 medicines for the symptomatology of ADHD such as "inattention" *(mind, concentration, difficult);* for "Hyperactivity" *(mind, activity, in general, hyperactive)* 40 medicines, and for "Impulsivity" *(mind, impulsive)* 44 medicines. Given below

17 Frei H. Homoeopathy and ADHD: A New Treatment concept with polarity analysis. Germany. Narayana Verlag; 2009.
18 Oberai P, Gopinadhan S, Varanasi R, Mishra A, Singh V, Nayak C. Homoeopathic management of attention deficit hyperactivity disorder: A randomised placebo-controlled pilot trial. Indian J Res Homoeopathy. 2013;7(4):158-67.
19 Lamont J. Homoeopathic Treatment of Attention Deficit Hyperactivity Disorder (ADHD). British Homoeopathic Journal. 1997; 86:196-200.
20 Frei H, Thurneysen A. Treatment for hyperactive children: Homeopathy and methylphenidate compared in a family setting. British Homeopathic Journal. 2001; 90(4): 183-188.
21 Frei H, Everts R, von Ammon K, Kaufmann F, Walther D, Hsu-Schmitz SF, et al. Homeopathic treatment of children with attention deficit hyperactivity disorder: a randomised, double blind, placebo-controlled crossover trial. Eur J Pediatr. 2005; 164(12): 758–767.
22 Frei H. Attention Deficit / Hyperactivity Disorder and Polarity Analysis: Features, Cases, Results. Simillimum Journal. 2014;1-24.
23 Jacobs J, Williams A, Girard C, Njike VY, Katz D. Homeopathy for attention-deficit/hyperactivity disorder: apilot randomized controlled trial. Journal of Alternative and Complementary Medicine. 2005;11(5):799–806.
24 Brulé D Sule L, Landau-Halpern B, Nastase V, Jain U, Vohra S, et al. An Open-Label Pilot Study of Homeopathic Treatment of Attention Deficit Hyperactivity Disorder in children and Youth. Forsch Komplementmed. 2014; 21(5):302–309.
25 Fibert P. Case report of a 16 year old youth with diagnoses of attention deficit hyperactivity disorder (ADHD), Asperger's syndrome and dyslexia receiving homoeopathic and tautopathic treatment. European Journal of Integrative Medicine. 2016;7(3):312-317.
26 Fibert P, Relton C, Heirs M, Bowden D. A comparative consecutive case series of 20 children with a diagnosis of ADHD receiving homeopathic treatment, compared with 10 children receiving usual care. Homeopathy. 2016;105(2):194-201.
27 Razlog R, Pellow J, White S J. A pilot study on the efficacy of Valeriana officinalis mother tincture and Valeriana officinalis 3X in the treatment of attention deficit hyperactivity disorder. Health SA Gesondheid. 2012;17(1): 1-7.
28 Strauss L C. The efficacy of a homoeopathic preparation in the management of attention deficit hyperactivity disorder. Biomedical therapy. 2000;18(2):197-201.
29 Fibert P, Peasgood T, Relton C. Rethinking ADHD intervention trials: feasibility testing of two treatments and a methodology. Eur J Pediatr. 2019;178(7):983-993.
30 Fibert P. Case report of two siblings with multi- morbidities receiving homeopathic treatment for one year. European journal of Integrative Medicine. 2016;8(2):141-145.

is the list of medicines with their indications collated from research papers and textbooks which can be used in treating children with ADHD. However, only these symptoms should not be used for finding the most similimum, constitutional or totality of symptoms including mental and physical generals must be the basis of prescription.

The commonly prescribed homoeopathic medicines and their indications are given below:

Medicines	General indications	Characteristic particulars
Calcarea carbonica	*Chilly patient; takes cold easily; fat, fair, flabby with large head, distended abdomen with red face; pale, weak, easily tired; head sweats profusely while sleeping; sour smelling discharges; longing for fresh air; slow development of mile stones; tendencyfor lymphatic glandular enlargement; desire for eggs and indigestible things; aversion to meat & milk; fearful, timid, shy*	• Lazy to do his works • Forgets easily especially what is read • Slow and sluggish
Lycopodium	*Intellectually keen but physically weak; upper part of body emaciated, lower part semi-dropsical; complexion pale, dirty, sallow with deep furrows; look old; recurrent respiratory and gastro-intestinal affections; worse from 4 to 8 pm; right sided complaints or symptoms shift from right to left; desire for warm foods and drinks, sweets; dominating, cranky, lack of self-confidence, precocious, desires company, shy, fear to be alone*	• Problems of self – esteem and low confidence • Bullying, domineering, arrogant behaviour to family and those with less authority, obedience to superiors • Reverses letters and words while reading and speaking • Stage fright
Phosphorus	*Chilly patient, tall, fast growing child with tendency to stoop; haemorrhagic tendency; craving for salt, cold foods and drinks; ice cream; aversion to milk; oversensitive to external impressions; nervous and affectionate, anxious esp. during thunderstorm*	• Startles easily • Mentally distractible • Unable to exert the mind • Answers slowly • Shamelessness • Talks during sleep • Fidgety, always want to do something with hands

31 Schroyens F. Synthesis Repertory. Treasure edition. Archibel S.A. Belgium RADAR version 10; 1995-2007.

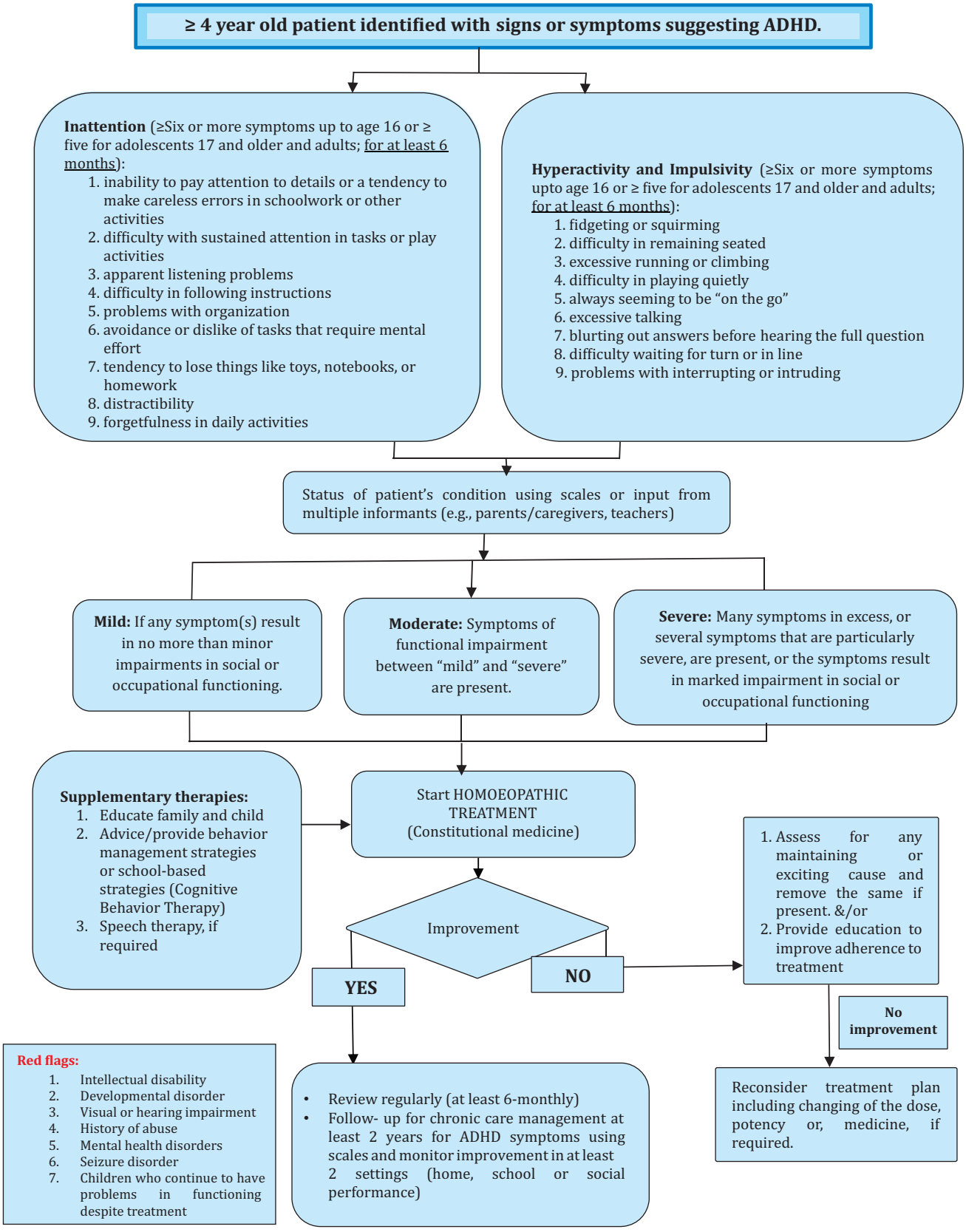
Medicines	General indications	Characteristic particulars
Hyoscyamus niger	*Increased cerebral activity, without inflammation; no control over urine & bowel; convulsions & twitching especially of the tongue; jealousy, loquacious, irritable, fear of being left alone; of running water even on hearing it, insects, snakes, of shinning objects, fire, glass, etc; aggravation at night*	• Makes mistakes while reading • Aggressive • Excessive sexual excitement, handles genitals • Irritability, tendency to hurt self when irritated
Sulphur	*Hot patient, kicks off the cloth at night; dirty, filthy, does not want to be washed; lean, thin, stoop-shouldered; child who walks and sit stooping; red orifices; desires sweets, sugar, meat; when the best selected remedy fails to improve*	• Extroverted, mechanically inclined, bossy children • Repeats the question before answering • Low self - confidence; needs to be praised • Irritable, very selfish in nature • Easily forgets things • Careless in handling objects; in dressing
Stramonium	*Painlessness of complaints; chorea, mania and fever delirium; young plethoric children, furious, malicious, fearful, desires light and company, worse in the dark and solitude*	• Restless • Violent behaviour of any type: biting, striking, strangling, tear off his clothes • Fear of dark, of being alone; clings to mother, water, animals • Night terrors • Loquacity; incessant & incoherent talking & laughing • Hyperactive children, behavioural disorders
Tarentula hispanica	*Chilly patient; hype rkinetic children with marked violence; deceitful, malicious; worse from grief and excitement*	• Tremendously hurried, intense, excited and restless • Extreme restlessness, must keep in constant motion, desire to run about, to dance and jump up and down, even though walking aggravates • Aversion to being touched, specific colours • Cunning, manipulative and dishonest

Medicines	General indications	Characteristic particulars
		• Destructive- breaks, tears and throws things • Tendency to steal things • Sensitivity to music which brings marked amelioration in hyperactivity with intense desire for dancing
Tuberculinum	*Takes cold easily; tall, lean, thin, narrow- chested, active & precocious mentally but weak physically; emaciated with good appetite; family / personal history of tuberculosis; changeability of symptoms; Obstinate and disobedient children; irritable, fretful, desire to use foul language, discontented, fear of dogs*	• Intense restlessness; child moves & runs, cannot remain quiet; constant desire for movement • Aversion to mental work • Strong desire for traveling / wandering • Mischievous, malicious behaviour, breaks things, breaks other's valuables • Symptoms are ever changing; erraticism • Children with violent character, become terribly angry on trifles
Veratrum album	*Chilly patient; weakness and cyanosis is the trio of the remedy; thin, anaemic; great prostration with vertigo, pale face and clean tongue; collapse; cold perspiration on forehead; voracious appetite; craves fruits, juicy and cold things, ice and salt; aversion to warm food; frenzy, shrieks, curses, desire to cut and tear things, howling all night, acute violent mania alternated with silence*	• Child is curious and almost adult level in conceptual ability cannot bear to be alone, yet persistently refuse talking and brood indifference. The inner frustration leads to disobedience and behavior problems • There is great restlessness in the child which is expressed by senseless, repetitive behavior such as stacking things, cutting paper into smaller bits; restless, cannot sit down to eat but instead must move constantly

Medicines	General indications	Characteristic particulars
Chamomilla	*Chilly patient; complaints during dentition; one cheek red and hot, the other pale and cold; nervous, excitable, uncivil, peevish, irritable, capricious and abnormally sensitive to pain quiet only when carried, wants many things and become angry when refused, or rejects when offered*	• Constant complaining and irritability • Demanding • Marked restlessness • Confused, not knowing what he wants; child demands one thing and then wants something else • Fidgety and desire to be carried • The child becomes so hyperactive that he gets exhausted and begins to cry • Dullness of the senses with diminished power of comprehension
Carcinosinum	*Thin, delicate looking children with fine skin and dark complexion or "Café au lait" hue, light-colored eyes with pigmented moles; strong family history of cancer, tuberculosis & other chronic illnesses; history of pneumonia, mumps, adenoids, typhoid, etc. in the child at an early age; history of excessive parental control in childhood; affectionate, loving, sensitive to others' sufferings, sympathetic to animals, fond of them, passionate, fastidious, fearful, sensitive to reprimands*	• Ailments after vaccination • Intellectual torpor; thinks with difficulty • Sensitive to all external impressions • Loves the excitement of thunderstorm • Starts at loud noise • Enjoys thunder storms • Fond of music and skilled at it • Fear of crowded or closed places
Natrum muriaticum	*Hot patient; poorly nourished, great emaciation (marked on neck); losing flesh while living well; craving for salt; aversion to bread and fatty things; constipated; increased thirst; mapped tongue with red insular patches; melancholic, sad, plays alone, irritable, cross, cries when*	• Ailments from sudden & abrupt separation from parents • History of grief, sadness, mental depression in mother during intrauterine period • History of maternal rejection towards the child before / during pregnancy • Speech delayed

Medicines	General indications	Characteristic particulars
	spoken to; awkward, hasty, drops things from nervous weakness; disposition to weep without cause, consolation aggravates	• Hurriedness • Oversensitive to music, startles from noise • Violent temper tantrums • Irresistible laughing at unsuitable times, followed by tearfulness, great sadness, and joylessness • Children late in learning to speak
Nux vomica	*Chilly patient; thin, prone to indigestion; tongue coated yellowish in the posterior part; oversensitive to all external impressions; noise, odors, light or music nervous disposition*	• Spare, quick, active, zealous, irritable, impatient and spiteful with violent behavior • Hyperactivity with impulsivity with desire to jump • Anger, violence, marked irritability • Defiance; resists all efforts of disciplining • Sensitive to noise • Tendency to break things from anger and frustration • Impatient, hates waiting in line or in traffic

ALGORITHM FOR TREATMENT PROCESS FOR ATTENTION DEFICIT HYPERACTIVITY DISORDER


≥ 4 year old patient identified with signs or symptoms suggesting ADHD.
Inattention (≥Six or more symptoms up to age 16 or ≥ five for adolescents 17 and older and adults; for at least 6 months):
1. inability to pay attention to details or a tendency to make careless errors in schoolwork or other activities
2. difficulty with sustained attention in tasks or play activities
3. apparent listening problems
4. difficulty in following instructions
5. problems with organization
6. avoidance or dislike of tasks that require mental effort
7. tendency to lose things like toys, notebooks, or homework
8. distractibility
9. forgetfulness in daily activities
Hyperactivity and Impulsivity (≥Six or more symptoms upto age 16 or ≥ five for adolescents 17 and older and adults; for at least 6 months):
1. fidgeting or squirming
2. difficulty in remaining seated
3. excessive running or climbing
4. difficulty in playing quietly
5. always seeming to be "on the go"
6. excessive talking
7. blurting out answers before hearing the full question
8. difficulty waiting for turn or in line
9. problems with interrupting or intruding
Status of patient's condition using scales or input from multiple informants (e.g., parents/caregivers, teachers)
Mild: If any symptom(s) result in no more than minor impairments in social or occupational functioning.
Moderate: Symptoms of functional impairment between "mild" and "severe" are present.
Severe: Many symptoms in excess, or several symptoms that are particularly severe, are present, or the symptoms result in marked impairment in social or occupational functioning
Supplementary therapies:
1. Educate family and child
2. Advice/provide behavior management strategies or school-based strategies (Cognitive Behavior Therapy)
3. Speech therapy, if required
Start HOMOEOPATHIC TREATMENT (Constitutional medicine)
Improvement
YES
NO
1. Assess for any maintaining or exciting cause and remove the same if present. &/or
2. Provide education to improve adherence to treatment
No improvement
Reconsider treatment plan including changing of the dose, potency or, medicine, if required.
Red flags:
1. Intellectual disability
2. Developmental disorder
3. Visual or hearing impairment
4. History of abuse
5. Mental health disorders
6. Seizure disorder
7. Children who continue to have problems in functioning despite treatment
• Review regularly (at least 6-monthly)
• Follow- up for chronic care management at least 2 years for ADHD symptoms using scales and monitor improvement in at least 2 settings (home, school or social performance)

Chapter 3

ALCOHOL DEPENDENCE

ALCOHOL DEPENDENCE

CASE DEFINITION

A chronic disease in which a person craves drinks that contain alcohol and is unable to control his or her drinking. A person with this disease also needs to drink greater amounts to get the same effect and has withdrawal symptoms after stopping alcohol use. Alcoholism affects physical and mental health, and can cause problems with family, friends, and work.[1,2]

INCIDENCE/PREVALENCE

- Worldwide, 3.3 million deaths every year result from harmful use of alcohol, this represents 5.9 % of all deaths.
- The harmful use of alcohol is a causal factor in more than 200 disease and injury conditions.
- Overall 5.1 % of the global burden of disease and injury is attributable to alcohol, as measured in disability-adjusted life years (DALYs).[3]
- Prevalence of alcohol use in India is reported to be 21.4% and there is increasing alcohol intake among the young people. 4.5% males and 0.6 % females in age group of 15 years and above are suffering from alcohol use disorders and 3.8% of males and 0.4% of females are suffering from Alcohol dependence.
- Deaths attributed to alcohol consumption in males and females are 62.9% and 33.2% respectively of total deaths in the country.[4]

PATHOPHYSIOLOGY

Alcohol affects virtually every organ system in the body and, in high doses, can cause coma and death. It affects several neurotransmitter systems in the brain, including opiates, gamma-aminobutyric acid (GABA), glutamate, serotonin, and dopamine. Increased opiate levels help explain the euphoric effect of alcohol, while its effects on GABA cause anxiolytic and sedative effects. Alcohol inhibits the receptor for glutamate. Long-term ingestion results in the synthesis of more glutamate receptors. When alcohol is withdrawn, the central nervous system experiences increased excitability. Persons who abuse alcohol over the long term are more prone to alcohol withdrawal syndrome than persons who have been drinking for only short periods. Brain excitability caused by long-term alcohol ingestion can lead to cell death and cerebellar degeneration, Wernicke-Korsakoff syndrome, tremors, alcoholic hallucinosis, delirium tremens, and withdrawal seizures. Opiate receptors are increased in the brains of recently abstinent alcoholic patients, and the number of receptors correlates with cravings for alcohol.[5]

---

1 CDC/National Center for Health Statistics. ICD-10-CM Diagnosis [Internet].2016[cited 2016 Mar 23]. Available from: http://www.icd10data.com/ICD10CM/Codes/F01-F99/F10-F19/F10-/F10.2

2 World health organisation. Management of substance abuse [Internet].2014[Cited 2014 Sep 18]. Available from: http://www.who.int/substance_abuse/terminology/definition1/en/

3 World Health Organization. Alcohol–fact sheet [Internet].2015[Cited 2015 March 18]. Available from: http://www.who.int/mediacentre/factsheets/fs 349/en/

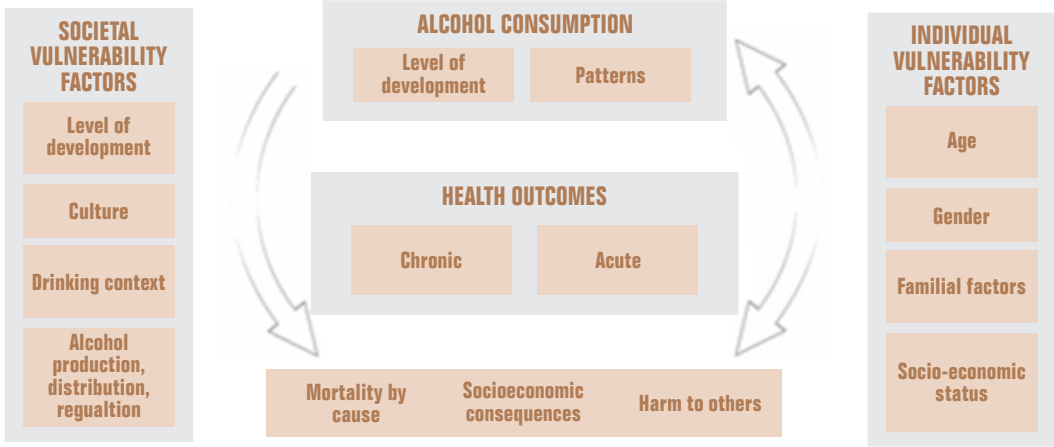
4 World Health Organization. Country Profile India [Internet].2014; 252. [Cited 2014 Sep 18]. Available from: http://www.who.int/substance_abuse/publications/global_alcohol_report/msb_gsr_2014_2.pdf?ua=1

5 Thompson W. Alcoholism [Internet]. Medscape [Cited 2014 Sep 18]. Available from: http://emedicine.medscape.com/article/285913-overview

RISK FACTORS[6]

- **Genetics –** Anybody who has a close relative with an addiction problem has a higher risk of having addiction.
- **Gender –** Significantly higher percentage of people addicted to a substance are male.
- **Mental illness**
- **Peer pressure**
- **Family behavior**
- **Loneliness**
- **Age when substance was first consumed –** People who start consuming a drug earlier in life have a higher risk of eventually becoming addicted, than those who started later.
- **Stress –** If a person's stress levels are high there is a greater chance a substance, such as alcohol may be used in an attempt to blank out the upheaval.

CONCEPTUAL CAUSAL MODEL OF ALCOHOL CONSUMPTION AND HEALTH OUTCOMES[3]:



- Quality of the alcohol consumed can also be a factor
- Development of health and welfare system, and economy as a whole

Source : Based on Rehm el al. 2010 and Blas et al. 2010

DIAGNOSIS[7]

The Tenth Revision of the International Classification of Diseases and Health Problems (ICD-10) diagnosed as alcohol dependent when three or more of the following manifestations should have occurred together for at least 1 month or, if persisting for periods of less than 1 month, should have occurred together repeatedly within a 12-month period:

6 Medical News today. Addiction [Internet]. Medical News today [Cited 2014 Sep 18]. Available from: https://www.medicalnewstoday.com/articles/323465

7 World Health Organization (WHO). International Statistical Classification of Diseases and Related Health Problems. 11th Revision. Geneva: WHO; 2018.

ICD-10 criteria for Alcohol dependence clustering criteria:

(A) Three or more of the following: occurring together for at least 1 month, or if less than 1 month, occurring together repeatedly within a 12-month period:

- A fervent desire or sense of compulsion to drink
- Need for significantly increased amounts of alcohol to achieve intoxication or desired effects; or markedly diminished effect with continued use of the same amount of alcohol
- Physiological symptoms characteristic of the withdrawal syndrome for alcohol; or use of alcohol (or closely related substances) to relieve or avoid withdrawal symptoms
- Difficulties in controlling drinking in terms of onset, termination, or levels of use; drinking in larger amounts or over a longer period than intended; or a persistent desire or unsuccessful efforts to reduce or control drinking
- Important alternative pleasures or interests given up or reduced because of drinking OR
- A great deal of time spent in activities necessary to obtain, to use, or to recover from the effects of drinking
- Persisting with drinking despite clear evidence and knowledge of harmful physical or psychological consequences

Duration criteria

(B) Three or more of dependence criteria occurring for at least 1 month, or if less than 1month, occurring together repeatedly within a 12-month period.

Signs and symptoms of alcohol withdrawal syndrome[5]

Signs

- Elevated blood pressure
- Tachycardia
- Elevated body temperature
- Sweating
- Tremulousness of body/increased hand tremor
- Dilated pupils
- Disorientation
- Hyper arousal

Symptoms

- Anxiety
- Insomnia
- Illusions
- Hallucinations
- Paranoid ideas
- Nausea
- Irritability
- Grand mal seizure

Signs of chronic alcoholism

- Gynecomastia
- Spider angiomata
- Dupuytren contractures (also may be congenital)
- Testicular atrophy

- Enlarged or shrunken liver
- Enlarged spleen

Biomarkers

Alcohol biomarkers are physiological indicators of alcohol exposure or ingestion and may reflect the presence of an alcohol use disorder. These biomarkers are not meant to be a substitute for a comprehensive history and physical examination. Indirect alcohol biomarkers, which suggest heavy alcohol use are as follows:[8]

- Aspartate aminotransferase (AST)
- Alanine aminotransferase (ALT)
- Gamma glutamyl transferase (GGT)
- Mean corpuscular volume (MCV)
- Carbohydrate-deficient transferrin (CDT)

Direct alcohol biomarkers include alcohol itself and ethyl glucuronide. A blood alcohol level detects alcohol intake in the previous few hours and thus is not necessarily a good indicator of chronic excessive drinking. Blood alcohol levels that indicate alcoholism with a high degree of reliability are as follows:[5]

- >300 mg/dL in a patient who appears intoxicated but denies alcohol abuse
- >150 mg/dL without gross evidence of intoxication
- >100 mg/dL upon routine examination

COMPLICATIONS/RED FLAGS[9]

- **Seizures:** Withdrawal seizures usually consist of generalized convulsions alternating with spasmodic muscular contractions (i.e., tonic-clonic seizures).
- **Delirium Tremens:** Delirium tremens is a serious manifestation of alcohol dependence that develops 1 to 4 days after the onset of acute alcohol withdrawal in persons who have been drinking excessively for years. Signs of Delirium tremens include extreme hyperactivity of the autonomic nervous system, along with hallucinations. Women experiencing Delirium tremens appear to exhibit autonomic symptoms less frequently than men.
- **Wernicke-Korsakoff Syndrome:** The combination of Wernicke's and Korsakoff's syndromes is not a complication of Acute Withdrawal (AW) but of a nutritional deficiency. The syndrome is characterized by severe cognitive impairment and delirium, abnormal gait (i.e., ataxia), and paralysis of certain eye muscles.
- **Disturbances of Mood, Thought, and Perception:** Withdrawing alcoholics exhibit

8 Substance Abuse and Mental Health Services Administration. Center for Substance Abuse Treatment. The Role of Biomarkers in the Treatment of Alcohol Use Disorders [Internet]. US Department of Health and Human Services; 2006. [cited 2016 Mar 28]. Available at http://store.samhsa.gov/shin/content/SMA12-4686/SMA12-4686.pdf

9 Trevisan LA, Boutros N, Petrakis IL, Krystal JH. Complications of alcohol withdrawal: pathophysiological insights. Alcohol Health Res World. 1998;22(1):61-6.

psychiatric difficulties that may be related to the process of withdrawal itself or to co-occurring conditions.

INVESTIGATIONS[10]

Laboratory investigations given below will further help in prognosis of the case:

Liver function tests:	
Aspartate transaminase (AST) and alanine transaminase (ALT)	• AST: ALT ratio ≥2 suggests alcoholic etiology
Gamma glutamyl transferase (GGT)	• Sensitive and an inexpensive indirect marker of alcohol consumption • May be a less-sensitive marker in young drinkers • Age dependent – levels increase with age, even in abstinent patients • Normalization requires 2-3 weeks of abstinence

DIFFERENTIAL DIAGNOSIS[5]

- Panic disorder
- Generalized anxiety disorder
- Social phobia
- Dysthymic disorder
- Anxiety disorders
- Bipolar Affective disorder
- Major depressive disorder
- Insomnia
- Panic disorder
- Social phobia

EVALUATION AND ASSESSMENT[11,12]

A. Scales for screening:

i. CAGE (cute down, annoyed, guilty, eye opener)

10 Arup consults. Physicians guide to laboratory tests-Alcohol abuse [Internet]. Arup consults [cited 2015 Oct 13]. Available from: http://www.arupconsult.com/Topics/AlcoholAbuse.html

11 Center for Substance Abuse Treatment. A Guide to Substance Abuse Services for Primary Care Clinicians (Treatment Improvement Protocol (TIP) Series, No. 24.) Appendix C—Screening and Assessment. Rockville (MD): Substance Abuse and Mental Health Services Administration (US); 1997.

12 Deady M. A Review of Screening, Assessment and Outcome Measures for Drug and Alcohol Settings [Internet]. Network of Alcohol & other Drug Agencies (NADA).2009[cited 2022 May 20]. Available from: https://www.drugsandalcohol.ie/18266/1/NADA_A_Review_of_Screening%2C_Assessment_and_Outcome_Measures_for_Drug_and_Alcohol_Settings.pdf

ii. **AUDIT:** The Alcohol Use Disorders Identification Test (AUDIT)

iii. **MAST-R for screening:** Michigan Alcohol Screening Test (MAST), Revised

B. **Scales for assessment**

i. SADQ (Severity of Alcohol Dependence Questionnaire)

ii. ADS (Alcohol Dependence Scale)

iii. CIWA-Ar (Clinical institute Withdrawal Assessment for Alcohol)

MANAGEMENT

General management[13]

Behavioural Treatments

Behavioural treatments are aimed at changing drinking behavior through counseling. They are led by health professionals and supported by studies showing they can be beneficial.

- **Cognitive–Behavioral Therapy :** This form of therapy is focused on identifying the feelings and situations (called "cues") that lead to heavy drinking and managing stress that can lead to relapse.
- **Motivational Enhancement Therapy :** The therapy focuses on identifying the pros and cons of seeking treatment, forming a plan for making changes in one's drinking, building confidence, and developing the skills needed to stick to the plan.
- **Marital and Family Counseling :** It incorporates spouses and other family members in the treatment process and can play an important role in repairing and improving family relationships.
- **Brief Interventions :** are short, one-on-one or small-group counseling sessions that are time limited.

Mutual-Support Groups and self- help groups

Alcoholics Anonymous (AA) and other programs provide peer support for people quitting or cutting back on their drinking. Combined with treatment led by health professionals, mutual-support groups can offer a valuable added layer of support.

Homoeopathic management

Homoeopathy is one of the most popular complementary and alternative medicine therapies and has strong focus on mental health disorders and has a role to play in managing alcohol dependents and in the withdrawal episodes as standalone or add on to conventional treatment. Often the first stage of alcohol management is detoxification and the attendant withdrawal syndrome which are usually seen within 24-72 hours of ceasing alcohol consumption. Patients need admission and close supervision to prevent infections and secondary complications.

13 Carter J, Sharon E, Stern TA. The management of alcohol use disorders: the impact of pharmacologic, affective, behavioral, and cognitive approaches. Prim Care Companion CNS Disord. 2014 Aug 21;16(4):10.4088/PCC.14f01683.

Research studies[14-21] on alcohol withdrawal and alcohol dependence with homeopathic medicines have shown to be useful.

Apart from medicinal management, counseling[22] and coping of patients play a vital role in the management. Counseling during the withdrawal episode/detoxification should be aimed specifically to supporting the patient through withdrawal symptoms, maintaining motivation, and facilitating post -withdrawal treatment. Handling of mental crisis may be needed during a withdrawal period as many patients will desire to address a range of personal, emotional or relationship problems at the start of treatment; however, these should be deferred until after withdrawal as attempting to work through such issues will certainly be anxiety provoking, which merely intensifies craving and jeopardizes withdrawal completion. Assure the patients that you understand that they have important issues they want to work through, explain why they are being deferred, and that there will be opportunities to address them as part of ongoing treatment after withdrawal.

Management of withdrawal symptoms as mentioned above should be treated symptomatically depending on the intensity of symptoms. If required in-patient hospital set up for severe cases to avoid undue complications.

The chronic phase needs a careful appraisal of the mind and the body. If there is any indication of liver involvement, (See investigations above) appropriate remedial support may be needed. The underlying mental state gives a good glimpse of the extent to which constitutional forces would be useful. Also, the treatment of the mental state is sometimes crucial for a good and lasting recovery. There are total 182 medicines in repertory under the rubric "alcoholism". Homoeopathy medicine helps the patient in reduction of craving for alcohol as well as controlling withdrawal symptoms. Medicines like ***Quercus:*** Takes away craving for alcohol drinks. ***Avena sativa:*** Alcoholism; sleeplessness; verge of delirium tremens esp. of alcoholics. ***Angelica atropurpurea:*** produced disgust for alcohol. ***Asarum:*** Desire for alcohol with nervousness and erethism. ***Zincum sulphuricum:*** Abuse of alcohol with chronic diarrhea.

Indications of some of the commonly indicated homoeopathic medicines for Alcohol dependence:[23]

---

14 Bakshi JPS. Homoeopathy – A New Approach to Detoxification [Internet]. Proceedings of the National Congress on Homoeopathy and Drug Abuse.1990; 20-28[cited on 2014 Oct 15]. Available from http://www.cam-quest.org/nl/search/therapies/?l1=403&show.

15 Garcia-SS. A Double-Blind, Placebo- Controlled Trial Applying Homeopathy to Chemical Dependency. Albany, California: Hahnemann College of Homeopathy; 1993. Available from: http://www.the-alcoholism-guide.org/homeopathic-remedies-for-alcohol-withdrawal.html

16 Nayak D, Arora S, Singh U, Borah N, Thakur JN and Khurana A. Managing acute alcohol withdrawal with Homoeopathy: A prospective, observational, multicentre exploratory study. Indian Journal of Research in Homoeopathy.2014;8(4):224-230.

17 Rogers J. Homoeopathy and the treatment of alcohol related problems. Complement Ther Nurs Midwifery.1997;3 (1):21-8.

18 Milewska G, Olga TT. Homoeopathic treatment of alcohol withdrawal. British Homoeopathic Journal. 1993; 82:249-251.

19 Gopinadhan S, Balachandran VA. A pilot study on the effect of Arsenicum Album in Alcohol dependents. CCRH Quarterly Bulletin.1994; sixteen (1&2):10-15.

20 Manchanda RK, Janardanan Nair KR, Varanasi R, Oberai P, Bhuvaneshwari R, Bhalerao R, Gnnanaprakasham M, Padmanabhan M, Siddiqui VA. A randomized comparative trial in the management of Alcohol Dependence: Individualized Homoeopathy versus standard Allopathic Treatment. Indian J Res Homoeopathy [serial online].2016;10:172-81.

21 Butehorn L, Gumz P, Randolph L. Nux vomica, the Arnica of Recovery from Addiction: An Exploratory Study of the Use of Homeopathy in the Reduction of Post–Acute Withdrawal Syndrome in Addiction Treatment.Homœopathic Links. 2015; 28(01): 054-056.

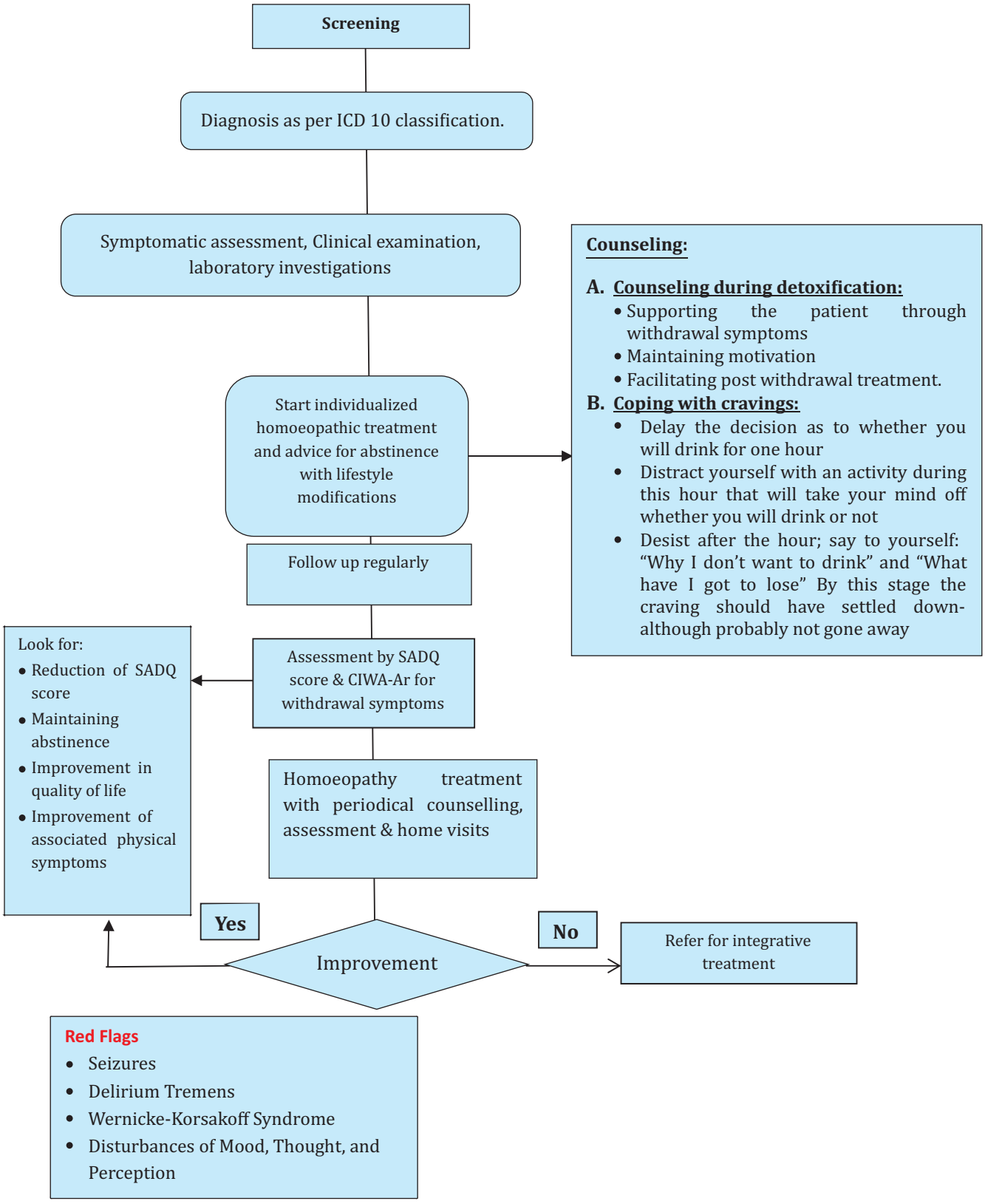
22 Department of health, Australian government. Alcohol withdrawal Management: Signs and symptoms of alcohol withdrawal [Internet]. Department of health, Australian government [cited 2015 Sept.15]. Available at www.health.gov.au/internet

23 Boericke W. Boericke's New Manual of Homoeopathic Materia Medica with Repertory: Third Revised & Augmented Edition based on Ninth Edition. New Delhi: B. Jain Publishers; 2007.

Medicines	General indications	Characteristic particulars
Arsenicum album	*Chilly patient; rapid disproportionate prostration; burning pains better by heat (except headache); cadaveric odour of discharges and body; anxiety, anguish, fear of death and restlessness*	• Morning vomiting of habitual drunkards; chronic gastric irritability • Heartburn, as if epigastrium and stomach were being made raw by an acrid corroding substance • Retching fruitless or retching and vomiting. Nausea, loathing and weakness satiety of life • Trembling of limbs
Lachesis mutus	*Hot patient; thin and emaciated; hemorrhagic diathesis; great sensitiveness to touch; hot flushes and perspiration; Desires oysters, alcohol, farinaceous food, all complaints worse after sleep; loquacious, jumps from one idea to another, jealous, suspicious, indolent*	• Ailments from grief or disappointed love • Coma and delirium from alcohol • Sensation in throat as if choking; cannot bear pressure around throat or waist • Diarrhea with languor and exhaustion, Haemorrhoids, constricted, strangulated and purplish which protrude after each pappy, offensive stool • Constipated offensive stool • Enlarged liver with tendency to formation of hepatic abscess; spleen diseased. Cannot bear anything around waist • Worse: after sleep • Better: warm applications, discharges
Nux vomica	*Chilly patient; thin; craves fats, spicy food, meat, alcoholic drinks; tongue coated yellowish in the posterior part; thirstlessness, oversensitive to external impressions: noise, odors, light or music; nervous disposition; spare, quick, active, zealous and irritable, impatient, spiteful with violent action*	• Anti- alcoholic remedy • Gastritis from alcohol abuse • Alcoholic hepatitis • Constipation with ineffectual urging for stool; small amounts passed which gives temporary relief • Diarrhea after taking alcohol • Worse: cold, cold dry wind • Better: warm drinks, warm application

Medicines	General indications	Characteristic particulars
Syphilinum	*Strong hereditary tendency to alcoholism. Craving for alcohol. Serrated teeth, Suffering from utter prostration and debility in the morning; successive abscesses, Apathetic and indifferent; compulsive checking, compulsive hand washing, night terror, destructive tendency*	• Utter prostration and debility in morning • Terrible dread of night on account of mental and physical exhaustion on awakening; it is intolerable, death is preferable • Absolute sleeplessness
Sulphuric acid	*Chilly patient; right sided complaints; pain appears and disappears suddenly; remedy for chronic alcoholism; carving for brandy and alcohol; cannot drink water until mixed with alcohol; alcoholic dyspepsia; hurried tendency; dissatisfied, peevish*	• Gastritis, eructations and indigestion, worse from alcohol • Pyrosis, morning vomiting, trembling, especially mornings • Drunkard on his last legs looks pale, shriveled and cold • Stomach will not tolerate any food
Ranunculus bulbosus	*Chilly patients; bad effects of alcohol; Irritable and touchy*	• Headache from alcoholic drinks • Delirium tremens • Spasmodic hiccough • Frequent eructations • Worse: open air, drafts of air, cold wet weather, changes in weather

ALGORITHM OF TREATMENT PROCESS FOR ALCOHOL DEPENDENCE


Screening
Diagnosis as per ICD 10 classification.
Symptomatic assessment, Clinical examination, laboratory investigations
Start individualized homoeopathic treatment and advice for abstinence with lifestyle modifications
Follow up regularly
Assessment by SADQ score & CIWA-Ar for withdrawal symptoms
Homoeopathy treatment with periodical counselling, assessment & home visits
Improvement
Yes
No
Refer for integrative treatment
Look for:
• Reduction of SADQ score
• Maintaining abstinence
• Improvement in quality of life
• Improvement of associated physical symptoms
Counseling:
A. Counseling during detoxification:
• Supporting the patient through withdrawal symptoms
• Maintaining motivation
• Facilitating post withdrawal treatment.
B. Coping with cravings:
• Delay the decision as to whether you will drink for one hour
• Distract yourself with an activity during this hour that will take your mind off whether you will drink or not
• Desist after the hour; say to yourself: "Why I don't want to drink" and "What have I got to lose" By this stage the craving should have settled down- although probably not gone away
Red Flags
• Seizures
• Delirium Tremens
• Wernicke-Korsakoff Syndrome
• Disturbances of Mood, Thought, and Perception

Chapter 4

BENIGN PROSTATIC HYPERPLASIA

BENIGN PROSTATIC HYPERPLASIA

CASE DEFINITION

Benign prostatic hyperplasia (BPH), also called benign enlargement of the prostate (BEP), or benign prostatic hypertrophy, is a noncancerous enlargement of the prostate gland. The enlarged prostate may compress the urinary tube (urethra), which courses through the center of the prostate, impeding the flow of urine from the bladder through the urethra to the outside. It is a histological diagnosis associated with unregulated proliferation of connective tissue, smooth muscle and glandular epithelium within the prostatic transition zone.[1] It is a common cause of significant lower urinary tract symptoms in men and is the most common cause of bladder outflow obstruction (BOO) in men > 70 years of age.[2]

INCIDENCE/PREVALENCE

- BPH is a common problem that affects the quality of life in approximately one third of men older than 50 years. BPH is histologically evident in up to 90% of men by age 85 years. Worldwide, approximately 30 million men have symptoms related to BPH.
- It tends to be more severe and progressive in African-American men because of the higher testosterone levels, 5-alpha-reductase activity, androgen receptor expression, and growth factor activity in this population.[3]
- A few epidemiological studies conducted on BPH patients from India suggest it as the most common pathological condition with an incidence of about 93.3%.[4,5]

AETIOLOGY/ RISK FACTORS

Two broad categories of risk factors associated with BPH are identified:[6]

Non-modifiable factors

- **Age:** Prevalence of BPH rises markedly with age
- **Geography:** Lower prostate volumes have been observed in men from Southeast Asia compared to western populations.
- **Genetics:** An autosomal dominant pattern of inheritance is suggested.

---

1 Auffenberg GB, Helfand BT, McVary KT. Established medical therapy for benign prostatic hyperplasia. Urol Clin North Am.2009; 36(4):443–59.

2 Russell RCG, Williams NS., Bulstrode CJK. Bailey Love's, Short Practice of Surgery 25th edition (International Student's edition) Edward Arnold Publishers Ltd.; 2008.

3 Deters L A, Kim ED. Benign Prostatic Hypertrophy [Internet]. 2021[cited 2022 Apr 26]. Available from: http://emedicine.medscape.com/article/437359-overview

4 Mittal BV, Amin MB, Kinare SG. Spectrum of histological lesions in 185 consecutive prostatic specimens. J Postgrad Med. 1989; 35(3):157-61.

5 Mathur SK, Gupta S, Marwah N, Narula A, Singh S, Arora B. Significance of mucin stain in differentiating benign and malignant lesions of prostate. Indian J Pathol Microbiol. 2003; 46(4):593-5.

6 Patel ND, Parsons JK. Epidemiology and etiology of benign prostatic hyperplasia and bladder outlet obstruction. Indian J Urol. 2014; 30(2): 170–6.

Modifiable factors

- **Sex steroid hormones:** Androgens (testosterone; especially dihydrotestosterone (DHT)) and estrogen are known to result in prostate enlargement.
- **Obesity and physical activity:** Increased adiposity and decreased physical activity is associated with increased prostatic volume.
- Presence of metabolic syndrome and diabetes.
- Other factors like smoking, diet and socio- economic status.[7]

DIAGNOSIS

Clinical presentation

Initial symptoms of BPH include difficulty in starting to urinate and a feeling of incomplete urination. The symptoms can be understood as irritative and obstructive.[2,7]

Irritative:

- Increased frequency
- Nocturnal urgency
- Urge incontinence

Obstructive:

- Hesitancy
- Decreased flow of urine
- Dribbling
- Straining
- Feeling of incomplete emptying of bladder
- Prolonged urination
- Urinary retention

Natural history of disease

BPH can be a progressive disease, especially if left untreated. Clinical endpoints of progression for BPH include the development of more severe symptoms like recurrent UTI, bladder stones, more severe bladder outlet obstruction, acute/ chronic urinary retention, bladder dysfunction manifested by incomplete emptying or detrusor instability, sepsis, incontinence, chronic renal insufficiency and hematuria.[8]

INVESTIGATIONS[2,3,7]

1. **Digital rectal examination:** to assess the prostate size and contour; presence of nodules and areas suggestive of malignancy.
2. **Ultrasonography:** Ultrasonography (abdominal, renal, transrectal) and intravenous urography are useful for helping to determine bladder and prostate size and the degree of hydronephrosis (if any) in patients with urinary retention or signs of renal insufficiency.

---

7 Praveen R. Benign prostatic hyperplasia: updated review. Int.Res.J.Pharm. 2013;4(8):45-51.

8 Lepor H. Pathophysiology, Epidemiology, and Natural History of Benign Prostatic Hyperplasia. Rev Urol. 2004; 6(suppl 9):S3-S10.

3. **Total Prostate-specific Antigen (PSA):** The normal values should be less than 4 nanogram /ml depending on age (if PSA concentration >10.0 ng/mL, the probability of cancer is high)
4. **Intravenous pyelogram with post voiding film**
5. **Uro-flowmetry:** is done electronically to determine bladder obstruction and speed of the urine flow. The values more than 15ml per second and voiding volume of 150 ml or more is considered to be normal.
6. **PVR urine volume –** One of the important tests for urinary incontinence. Normally, about 50 ml or less of urine is left after urination; more than 200ml is a definite sign of abnormalities.
7. **Other extended tests include:** Urethrocystoscopy, Urine analysis, Urine culture, Blood analysis for electrolytes, blood urea nitrogen (BUN), and creatinine, Renal function tests.

COMPLICATIONS[2,7]

In general, BPH progresses slowly. However, condition might complicate due to:

- Bladder outlet obstruction resulting in: Acute retention; inability to pass urine; supra-pubic constant, dull aching pain; increased voiding pressure
- Chronic retention resulting in: Overflow incontinence; enuresis and renal insufficiency
- Impaired Bladder emptying resulting in: Urinary infection and calculi
- Features of uremia resulting in: Headache; fits; drowsiness

DIFFERNTIAL DIAGNOSIS[2]

- Neurogenic bladder
- Prostatitis
- Bladder cancer
- Prostate cancer
- Cystitis
- Urinary tract infection

RED FLAGS[2]

- Acute retention: inability to pass urine
- Chronic retention
- Overflow incontinence
- Gross hematuria
- Uremia (persistent bothersome symptoms)

EVALUATION AND ASSESSMENT

- International Prostate Symptom Score (IPSS)[9] /American Urological Association Symptom Index (AUA-SI)[10]
- BPH Impact Index[10]

9 NHS. Royal United Hospital bath. International Prostate Symptom Score (IPSS) [Internet] [cited 2016 Mar 23]. Available from: http://www.ruh.nhs.uk/patients/Urology/documents/patient_leaflets/Form_IPSS.pdf

10 AUA. Guideline on the Management of Benign Prostatic Hyperplasia: Diagnosis and Treatment Recommendations. [internet] [cited 2016 Mar 23]. Available from: https://www.auanet.org/common/pdf/education/clinical-guidance/Benign-Prostatic-Hyperplasia.pdf

MANAGEMENT

General management

BPH management has been broadly categorized into three types.[11] They are watchful waiting, medicinal management and ultimate is surgery when the patient fails to respond to medical treatment.

As long as the symptoms are mild and are not causing any change in the day-to-day activities, wait and watch approach with regular check-up is recommended. It is appropriate in patients with mild to moderate IPSS symptom score. Lifestyle alterations to manage the symptoms of BPH include[7]

- decreasing fluid intake before bedtime
- moderating the consumption of alcohol and caffeine-containing products
- following a timed voiding schedule
- practicing muscle strengthening exercise: Kegel exercises (pelvic exercises)

The aim of treatment of BPH is to improve symptoms, relieve obstruction, improve bladder emptying, prevent UTI's and avoid renal insult. If the symptoms are troublesome medicinal aid is required.

Homoeopathic management

In homoeopathy, observational studies[12-16] case series[17,18] and reports[19-23] in the past throw light on its usefulness in BPH. Experiences of many physicians have also shown that homoeopathic medicines can improve distressing symptoms of BPH: relieve obstruction, as well as improve bladder emptying for the relief of the patient.

---

11 Dhingra N, Bhagwat D. Benign prostatic hyperplasia: An overview of existing treatment. Indian J Pharmacol. 2011; 43(1): 6–12.
12 Gupta G, Singh J P, Tandon S, Singh S, Nayak C, Singh H, et al. Evidence Based clinical study to assess the usefulness of homeopathic medicines in patients of Benign Prostatic Hyperplasia. Indian Journal of Research in Homeopathy. 2010; 4(4):49-56.
13 Oberai P, Varanasi R, Ramesh D, Arya DD, Reddy GRC, Sharma SK, et al. Homoeopathic medicines in the management of benign prostatic hyperplasia: A multicentric prospective observational study. Indian Journal of Research in Homeopathy. 2012; 6(3): 16-25.
14 Acharya A, Reddy SR, Singh P, Sharma P, Singh C, Chakrborty PK. A Clinical Study of Benign Prostate Hyperplasia with Effect of Homoeopathy Medicine. TUJ.Homo & Medi.Sci. 2020;3(4):11-18.
15 Gupta N, Singh R, Saxena RK. Clinical Evaluation of Homoeopathic Medicines in Benign Prostatic Hyperplasia. Homœopathic Links. 2019; 32(02): 082-087.
16 Hati AK, Paita B, Naik KN, Mishra AK, Chainy, Nanda LK. Constitutional, organopathic and combined homeopathic treatment of benign prostatic hypertrophy: a clinical trial. Homeopathy. 2012; 101(04): 217-223.
17 Reddy GRC, Oberai P, Singh V, Nayak C. Treating Prostatic Hyperplasia in Elderly Men with Homeopathy- A series of 11 cases. Indian Journal of Research in Homeopathy. 2009; 3(4):37-43
18 Gupta G, Nayak C, Kumar A, Sexena RK. Homoeopathic Treatment of Benign Prostatic Hyperplasia: A Case Series. Homœopathic Links. 2018; 31(03): 209-219.
19 Gupta G. Ultrasonographic assessment of Benign Prostate Hypertrophy cases in response to Homeopathic drugs. Asian Homeopathic Journal. 1994; 4(3):10-17.
20 Gupta G, Gupta N, Singh V, Chaudhary M, Singh M. Evidence based study on cases of Benign Prostatic Hyperplasia in response to homeopathic drugs. The Homeopathic Heritage. 2006; 31(7): 31-41.
21 Chakma A, Shil RC, Ghosh MS. Benign prostatic hyperplasia: An evidence-based case report treated with homoeopathy. Indian J Res Homoeopathy. 2018;12(2):101-6.
22 Sharma MP, Vangani AK, Sharma R, Vyas H, Jain A, Sharma B. Treatment of benign prostatic hypertrophy in homoeopathy with repertorial analysis –a case study with review of ancient Indian medicine. European Journal of Molecular & Clinical Medicine. 2020;7(2):1260-77.
23 Prasad S, Prasad R, Kumari V, Kumar N, Kumar A, Srivastava AK. Benign prostatic hyperplasia & its homoeopathic approach. GJRA. 2020;9(6):30-31.

Homoeopathic literature[24-31] contains references to many medicines for BPH. These include our well known polychrest remedies, some organopathic remedies and other remedies with their specific indications which, when found well indicated in a case possess no less power to cure the patient as our more commonly prescribed polychrests. Organopathic remedies may find their use in cases with symptoms not pointing to any other medicine clearly. A few examples with their indications are: ***Hydrangea arborescens:*** enlarged prostate with great thirst; white amorphous salts in the urine; enlarged prostate with residual urine and renal stone. ***Triticum repens:*** enlarged prostate; strangury, pyelitis. ***Acid picricum:*** prostatic hypertrophy, in cases not too far advanced. ***Digitalis:*** senile hypertrophy of prostate with marked cardiac symptoms. ***Populus tremuloides:*** enlarged prostate with residual urine; severe tenesmus, dysuria scalding, urine contains mucus and pus, pain behind the pubis at the end of micturition.

The indications of few important remedies are given below. However, the presenting totality of symptoms indicative of any medicine in the homoeopathic materia medica shall always be the sole guide for every individual case.

Medicines	General indications	Characteristic particulars
Pulsatilla nigricans	*Hot patient; marked changeability of symptoms; aversion to fatty foods, warm foods and drinks, dislikes butter; thirstless with great dryness of mouth; tongue coated yellow or whitish; worse towards evening and in warm room, better in open air, by slow, gentle motion and cold applications; desire for company, mild, gentle, affectionate, yielding, weeping disposition*	• Prostate enlargement with pain and tenesmus in urinating, worse lying on back • Bladder pain, worse at the need of micturition, worse if trying to retain. After micturition, spasmodic pains in the neck of the bladder, extending to pelvis and thighs • Involuntary micturition at night, while coughing or passing flatus. Prostatic troubles with small and flattened fæces • Worse: night, evening • Better: open air

24 Zandvoort RV. Complete Repertory 3.0.(English) 5.1 Repertory by, Mac Repertory for Windows, Kent Homoeopathic Associates, USA.

25 Murphy R. Homoeopathic Medical Repertory. Third Edition. Lotus Health Publishers; 2005.

26 Boerick W. Boericke's New Manual of Homoeopathic Materia Medica with Repertory: Third Revised & Augmented Edition based on Ninth Edition. B. Jain Publishers, New Delhi; 2010.

27 Allen HC. Allen's Keynotes- Rearranged and classified with leading remedies of the Materia Medica and bowel nosodes. 10th Reprint edition. New Delhi: B Jain Publishers Pvt Ltd.; 2006.

28 Clarke JH. A dictionary of Practical Material Medica. Reprint edition. New Delhi: B Jain Publishers (P) Ltd; 2007.

29 Pulford. Key to the Homeopathic MateriaMedica. Second Edition. New Delhi: B Jain Publishers; 1947.

30 Boger CM. A synoptic key of the MateriaMedica. Reprint edition. New Delhi: B. Jain Publishers Pvt. Ltd.; 2008.

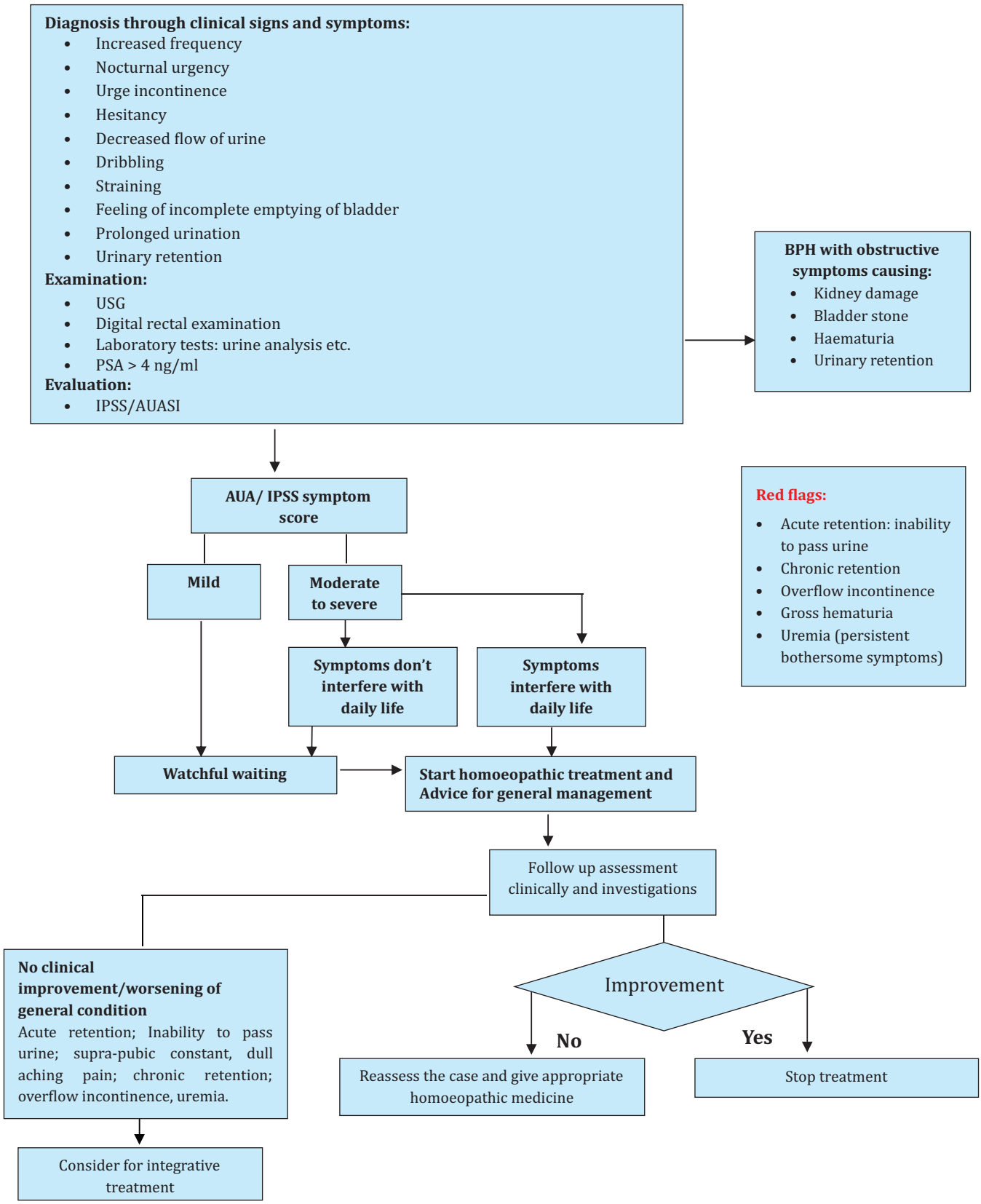
31 Allen T F. Handbook of Materia Medica and Homeopathic Therapuetics. First edition. New Delhi: B Jain Publishers Pvt. Ltd; 1889.

Medicines	General indications	Characteristic particulars
Conium maculatum	*Chilly patient, perspires during sleep; desires salt; glandular affection; emotionally closed, flat or hard people, mental dullness or confusion; debility of mind and body; generally aggravation from suppression of sexual desire; the complaints of conium originates slowly and progressively*	• Prostatic enlargement; weight or heaviness felt in the perineum • Prostatic discharge • Much difficult in voiding urine; urination interrupted despite straining; it flows and stops again; then flows easily after he relaxes • Pressure in the neck of the bladder with stiches worse when walking; better when sitting
Sabal serrulata	*Despondent, irritable, sympathy seems to anger him, apathy and indifference, general and sexual debility, atrophy of testes and loss of sexual power; fear of going to sleep*	• Cystitis with prostatic hypertrophy • Discharge of prostatic fluid with enlargement of the gland Difficult urination and smarting and burning in urethra • Constant desire to pass urine at night
Calcarea carbonica	*Chilly patient; takes cold easily; fat, fair, flabby, distended abdomen; pale, weak, easily tired; head sweats profusely while sleeping; sour smelling discharges; longing for fresh air; desire for eggs and indigestible things, sweets aversion to meat and milk; fearful, shy, timid, slow and sluggish; feels better when constipated*	• Useful in cases where symptoms of irritable bladder predominate • Stitching cutting pain in urethra with ineffectual desire to urinate • Urination painful; urine dark brown, sour, fetid, abundant, with white sediment
Baryta carbonica	*Chilly patient, greatly sensitive to cold, have offensive foot - sweat, mentally and physically dwarfish; timid, weary and lack self - confidence, avoid strangers and thinking of complaints makes them worse, better in open air*	• Enlarged prostate and indurated testes • Urgent inclination to pass urine; which can hardly be retained • Burning in urethra while urinating • Renewed desire after urinating, followed by dribbling when walking • Every time patient urinates, his piles protrudes

Medicines	General indications	Characteristic particulars
Chimaphila umbellata	*Hot patient, nervous, irritable, restless, melancholic; have a faint feeling and are weak*	• Prostate enlargement showing symptoms of acute prostatitis • Retention of urine and a feeling of a ball in perineum when sitting; from sitting on cold stones or pavements • Scanty urine, loaded with ropy or muco - purulent sediment • Burning and scalding during micturition, and straining afterwards • Unable to urinate without standing with feet wide apart and body inclined forward
Thuja occidentalis	*Chilly patient; with illusions & fixed ideas. Unhealthy skin with tendency for warty growths; oily / greasy sweat, face & stool; perspiration on uncovered parts. Complaints worse from cold, warm air & damp humid atmosphere and chronic complaints better during a cold*	• Prostatic enlargement with pain and burning felt near neck of bladder, with frequent and urgent desire to urinate • Must urinate many a times before the bladder is emptied • Sensation as of urine trickling in urethra after urinating; severe cutting pain worse after urination
Ferrum picricum	*Dark - haired patients, plethoric, warts and epithelial growths. Complaints worse from fatigue*	• Senile hypertrophy of the prostate; frequent micturition at night, with full feeling and pressure in rectum • Smarting at neck of bladder and penis. Retention of urine
Sulphur	*Hot patient; kicks off the cloth at night; dirty, filthy, does not want to be washed; lean, thin, stoop-shouldered patients who walk and sit stooping; prone to skin affections, venous congestions; especially of portal system; have a very weak and faint feeling about 11 a.m. and must have something to eat; desires sweets; have burning heat of palms and soles especially at night; aversion to being washed;*	• Painful ineffectual efforts to urinate, with retention • Frequent micturition, especially at night • Burning in urethra during micturition, lasts long after • Mucus and pus in urine; offensive urine; parts sore over on which it passes

Medicines	General indications	Characteristic particulars
	worse from standing, at night; when the best selected remedy fails to improve; restless, quick tempered	
Lycopodium clavatum	*Hot patient, intellectually keen but physically weak; upper part of body emaciated, lower part semi - dropsical; complexion pale, dirty, sallow with deep furrows; looks old; recurrent respiratory and gastro - intestinal affections; tendency for flatulent dyspepsia; worse from 4- 8 pm; right sided complaints or symptoms shifts from right to left; desire for warm foods and drinks, sweet; dominating, cranky, lack of self - confidence, precocious*	• Hypertrophy of the prostate with pain in back before urinating which ceases after flow; flow of urine slow, must strain • Polyuria during the night. Heavy red sediment in urine

ALGORITHM OF TREATMENT PROCESS FOR BENIGN PROSTATIC HYPERPLASIA



BRONCHIAL ASTHMA

BRONCHIAL ASTHMA

CASE DEFINITION

Bronchial asthma is a disease characterized by (i) airway obstruction (airway narrowing) that is reversible (but not completely so in some patients) spontaneously or with treatment; (ii) airway inflammation; and (iii) airway hyper responsiveness to a variety of stimuli.[1]

INCIDENCE/PREVALENCE[2]

- The burden of asthma is immense, with more than 300 million individuals currently suffering from asthma worldwide, about a tenth of those living in India.
- The prevalence of asthma has been estimated to range 3-38% in children and 2-12% in adults, being the commonest chronic disorder among children.
- A recent Indian Study on Epidemiology of Asthma, Respiratory Symptoms and Chronic Bronchitis (INSEARCH) done with 85,105 men and 84,470 women from 12 urban and 11 rural sites in India estimated the prevalence of asthma in India to be 2.05% among those aged >15 years, with an estimated national burden of 18 million asthmatics.

AETIOLOGY[3]

The strongest risk factors for developing asthma are:

- Exposure, especially in infancy, to indoor allergens (such as domestic mites in bedding, carpets and stuffed furniture, cats and cockroaches)
- Family history of asthma or allergy
- Exposure to tobacco smoke and exposure to chemical irritants in the workplace
- Other risk factors include certain drugs (aspirin and other non-steroid anti-inflammatory drugs), low birth weight and respiratory infection. The weather (cold air), extreme emotional expression and physical exercise can exacerbate asthma.

PATHOPHYSIOLOGY[4]

- Asthma is a chronic inflammatory disorder of the airways. This feature of asthma has implications for the diagnosis, management, and potential prevention of the disease
- The immunohistopathologic features of asthma include inflammatory cell infiltration (Neutrophils (especially in sudden-onset, fatal asthma exacerbations; occupational asthma, and patients who smoke), Eosinophils, Lymphocytes, Mast cell activation and Epithelial cell injury
- Airway inflammation contributes to airway hyper-responsiveness, airflow limitation, respiratory symptoms, and disease chronicity

---

1 Pekkanon J, Pearce N. Defining asthma in epidemiological studies. Eur Respir J.1999; 14:951-957.

2 Koul PA ,Patel D. Indian guidelines for asthma: Adherence is the key. Lung India. 2015; 32(Suppl 1): S1–S2.

3 World Health Organization. Bronchial asthma. Fact sheet N°206. [Internet].[Cited2018 Mar 26] Available at : http://www.who.int/respiratory/asthma/causes/en/

4 National Heart, Lung, and Blood Institute (US).National Asthma Education and Prevention Program, Third Expert Panel on the Diagnosis and Management of Asthma. [internet] Bethesda (MD): National Heart, Lung, and Blood Institute (US); 2007 [cited 2018 Mar 27]. Available at: https://www.ncbi.nlm.nih.gov/books/NBK7223/

- Viral respiratory infections are one of the most important causes of asthma exacerbation and may also contribute to the development of asthma
- Atopy, the genetic predisposition for the development of an immunoglobulin E (IgE)-mediated response to common aeroallergens, is the strongest identifiable predisposing factor for developing asthma
- In some patients, there occurs persistent changes in airway structure, including sub-basement fibrosis, mucus hypersecretion, injury to epithelial cells, smooth muscle hypertrophy, and angiogenesis
- Gene-by-environment interactions are important to the expression of asthma

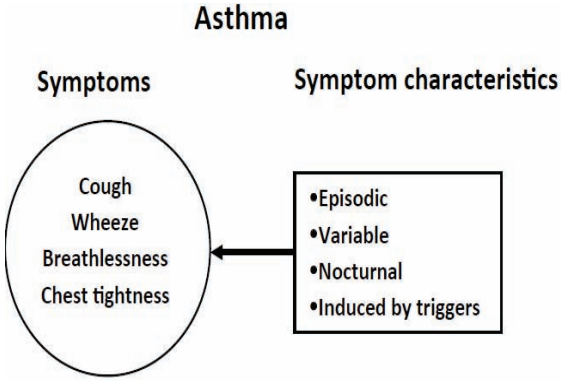
CLASSIFICATION[5]

Bronchial asthma is divided into intrinsic and extrinsic types. The main difference between the two is the level of involvement of the immune system:

- In extrinsic asthma, symptoms are triggered by an allergen (such as dust mites, pet, dander, pollen, or mold). The immune system overreacts, producing too much of a substance (called IgE) throughout the body. It's the IgE that triggers an extrinsic asthma attack.
- In intrinsic asthma, IgE is usually only involved locally, within the airway passages.

DIAGNOSIS[6-11]

Diagnosis of asthma based on clinical presentation/ medical history, physical examination and objective measurements



Clinical presentation

- It is characterized by:
  - o Breathlessness
  - o Wheeze (Polyphonic in nature)
  - o chest tightness especially at night or in early morning

5 Cafasso J. Intrinsic asthma[Internet].Healthline;2018.Available from: https://www.healthline.com/health/intrinsic-asthma#intrinsic-vs-extrinsic-asthma

6 Kim H, Mazza J. Asthma. Allergy, Asthma & Clinical Immunology. 2011; 7 (Suppl):S2.

7 Empey DW, Laitinen LA, Jacobs L, Gold WM, Nadel A. Mechanisms of bronchial hyper-reactivity in normal subjects after upper respiratory tract infection. Am Rev Respir Dis.1976; 113:131.

8 Corrao WM, Braman SS, Irwin RS. Chronic cough as the sole presenting manifestation of bronchial asthma. N Engl J Med. 1979; 300(12): 633-7.

9 Levy ML, Fletcher M, Price DB, Hausen T. International Primary Care Respiratory Group (IPCRG) guidelines. Diagnosis of respiratory diseases in primary care. Prim Care Respir J 2006; 15(1): 20-34.

10 Gibson PG, Fujimura M, Niimi A. Eosinophilic bronchitis. Clinical manifestations and implications for treatment. Thorax. 2002; 57(2):178-82.

11 Singh N, Singh V. Clinical Presentations and Investigations in Asthma. supplement to Journal of The Association Of Physicians Of India. 2014; 62:7-11.

- The severity of these symptoms is variable, occur in episodes and these may occur abruptly or may develop over a period of days or weeks, provoked by triggers (allergic or non-allergic) including exercise (Table 1)
- Some patients complain of asthmatic attacks mainly at night or in early morning. These episodestypically occur between 4 am and 6 am in the morning and they wake tend to wake up the patient.

Table1: Trigger factors of asthma

Allergic trigger factors	Non-allergic trigger factors
• House dust mite • Pollen • Fungal spore • Pet	• Exercise • Food • Drinks • Drugs • Viral infections • Air pollution • Smoking (asthma-COPD overlap) • Psychological factors • Climatic variations • Gastro-oesophageal reflux • Occupational factors

Physical examination

- Examine for wheezing on auscultation
- Examine upper respiratory tract and skin for signs of other atopic conditions

Severity of asthma[12]

Three variables are considered in categorizing asthma severity: daytime symptoms, nighttime symptoms and lung function (Table 2). Abnormalities within each of these three variables are graded into four separate categories of severity. Overall asthma severity is categorized according to the worst individual variable. For example, if a patient has frequent nighttime symptoms (placing them in the severe, persistent category for this variable) but has daytime symptoms less than twice per week and normal lung function (both in the mild, intermittent category), the overall asthma categorization is severe, persistent.

12 Collice GL. Categorizing Asthma Severity: An Overview of National Guidelines. Clinical Medicine & Research. 2004;2(3):155-163.

Table 2: Classification of Asthma Severity: Method of Expert Panel Report			
Severity	**Symptoms**	**Night time symptoms**	**Lung function**
Severe Persistent	Continual symptoms Limited physical activity Frequent exacerbations	Frequent	PEF variability >30% FEV1/PEF ≤60%
Moderate persistent	Daily symptoms Daily use of short acting B antagonists Exacerbations affect activity Exacerbations ≥ 2/week	>1/week	FEV1/PEF >60% but < 80% PEF variability >30%
Mild persistent	Symptoms >2/week but <1/day Exacerbations may affect activity	>2/month	FEV1/PEF ≥80% PEF variability 20% to 30%
Mild intermittent	Symptoms ≤ 2/week Asymptomatic between exacerbations Exacerbations brief	≤ 2/month	FEV1/PEF≥80% PEF variability < 20%

Table 3: Classification of asthma severity; methods of Australian National Asthma campaign								
Severity	**Wheeze Tightness Cough dysponea**	**Night time symptoms**	**Symptoms on waking**	**Admission or emergency visits**	**Previous life-threatening attack**	**Short acting beta antagonist use**	**FEV 1**	**PEF**
Severe	Every day	> 1/ week	>1/week	usually	May have a history	> 3 to 4/day	< 60%	<80%
Moderate	Most days	< 1/week	<1/week	Usually not	Usually not	Most days	60% to 80%	80 % to 90%
Mild	occasional	absent	absent	absent	absent	<2/week	>80%	>90%

INVESTIGATIONS[11]

Table 4 : Severity of Airflow Limitation	
Degree of severity	FEV1% predicted
Mild	>70
Moderate	60-69
Moderately severe	50-59
Severe	35-49
Very Severe	<35

- **Spirometry:** This is the recommended method of measuring airflow limitation and reversibility to establish a diagnosis of asthma. Measurement of FVC and FEV1 are obtained during a forced expiratory maneuver using a spirometer. Spirometry procedures are standardized[13,14] and efforts must be made to obtain a proper test. Depending on FEV1% predicted severity can be determined (Table 4).

13 European Respiratory Society. Standardized lung function testing, Official statement of the European Respiratory Society. EurRespir J suppl.1993; 16:1-100.

14 American Thoracic Society. Standardization of spirometry,1994 Update. .Am RespirCrit Care Med.1995;152(3):1107-36.

- **Peak flow meter testing:** A peak flow meter for asthmatic patient is like a thermometer for a fever patient. It helps to monitor severity of asthma. Peak flow meter measures peak expiratory flow rate (PEFR), that is, the maximal rate at which a person can exhale during a short maximal expiratory effort after a full inspiration. In outpatient department measurement of PEFR provides a quick assessment about airway obstruction. Peak flow meter is also useful for monitoring severity of asthma at home. PEFR readings are taken daily, and a chart is maintained by patient for home monitoring of asthma.
- **Bronchoprovocation testing:** Airway hyperresponsiveness can be measured by bronchoprovocation tests (BPT). In BPT, increasing doses of a triggering substance are inhaled and FEV1 is measured. The dose at which FEV1 falls by 20% is called provocating dose 20% (PD20%). This method is useful in making diagnosis of asthma in cases of unusual presentations or when spirometry shows no airflow obstruction or reversibility.
- **Skiagram chest:** It is usually normal in asthmatic subjects. It is used to exclude other diagnosis such as pneumonia, pneumothorax and Allergic bronchopulmonary aspergillosis (ABPA).
- **Eosinophil count:** The total eosinophil levels may be raised in allergic asthma. Markedly elevated eosinophil count (>15percent or >1500 eosinophils/microL) in a patient with allergic asthma should raise suspicion for diseases like ABPA, Churg-Strauss syndrome, Loeffler's syndrome and tropical eosinophilia.
- **Total IgE:** Total serum Immunoglobulin E (IgE) levels are usually elevated in allergic asthma. The levels are increased more than 1000 in ABPA.
- **Blood tests for allergen- specific IgE:** This type of test uses enzyme linked immunosorbent assay (ELISA) to detect IgE directed towards a specific allergen. The test is done for allergens suspected to be the probable triggers of asthma in an individual patient. The drawback of this test is its high cost.
- **Allergy skin prick test:** This test is performed by a highly trained technician and involves testing a number of indoor and outdoor allergens by skin prick test. The results of this test get hampered by intake of anti-histaminics and other medicines.

COMPLICATIONS[15]

- Pneumonia
- Smoking respiratory syndrome
- Respiratory failure
- Atelectasis
- Cystic degeneration

DIFFERENTIAL DIAGNOSIS

Diseases causing recurrent episodes of dyspnoea

- COPD

15 Waldbott GL. Complications of Bronchial Asthma. Int Arch Allergy.1961;18:112–120.

- Coronary artery disease
- Congestive heart failure
- Pulmonary embolism
- Recurrent gastro esophageal reflux with aspiration

Diseases causing cough

- Rhinitis
- Sinusitis
- Bronchitis
- Bronchiectasis
- Cystic fibrosis
- Pulmonary Fibrosis

Diseases causing airflow obstruction

- COPD
- Emphysema
- Bronchiolitis obliterans
- Cystic fibrosis
- Extrinsic or intrinsic narrowing of the trachea or major bronchi

RED FLAGS

- Status asthmaticus
- Extreme difficulty in breathing
- Severe chest pain
- Difficulty walking or talking
- Bluish tint to the skin

EVALUATION AND ASSESSMENT[5,16,17,18]

- Asthma Control Questionnaire
- Asthma Therapy Assessment Questionnaire
- Asthma Control Test (http://getasthmahelp.org/documents/2007Guidelines_ValidatedQuestionnaires.pdf)
- Asthma Control score
- Childhood Asthma Control Test
- Lara Asthma Symptom Scale
- Paediatric/Adolescent Asthma Therapy Assessment Questionnaire (https://mydoctor.kaiserpermanente.org/ncal/Images/Pediatric%20Asthma%20Therapy_tcm75-70731.pdf)

16 Alzahrani YA ,Becker EA. Asthma Control Assessment Tools. Respiratory Care.2016;61(1):106-116.

17 Liu AH, Zeiger RS, Sorkness CA, Ostrom NK, Chipps BE, Rosa K, et al. The Childhood Asthma Control Test: retrospective determination and clinical validation of a cut point to identify children with very poorly controlled asthma. J Allergy Clin Immunol. 2010;126(2):267-73, 273.e1.

18 Wood PR, Smith B, O'Donnell L, Galbreath AD, Lara M, Forkner E, Peters JI. Quantifying asthma symptoms in adults: the Lara Asthma Symptom Scale. J Allergy Clin Immunol. 2007;120(6):1368-72.

MANAGEMENT

General management[19]

These goals can be achieved by focusing our attention to the following components of asthma therapy

I. Patient education and self-management
II. Lifestyle modifications
III. Allergen and risk factor avoidance
IV. Assess, treat and monitor asthma
V. Effectively manage asthma exacerbations

Homoeopathic management

The end objective of any therapeutic intervention is to bring about total and lasting relief termed as 'cure', if a disease is curable. Whereas in incurable chronic conditions, malignant or benign, the objective is to provide symptomatic relief in order to ease suffering and improve the quality of life. The cases where complete cure is not possible, treatment aims to control the disease and to keep the patient normal or near normal and comfortable as long as possible.

While treating patients homeopathically, treatment of acute exacerbation has its own significance other than alleviating patient of agony of acute attack. Failure to mitigate acute attack, may lead to patient being lost to follow up. Successful management of acute exacerbations instills confidence in his physician paving way for a long-term association between the two. Most of the time during acute asthma attack patient cannot conveniently express his discomfiture. Thus, the resultant paucity of symptoms makes it quite an arduous task on the part of physician to come to a ***simillimum.*** A physician's acumen and observations are important components in making a suitable prescription. Sometimes use of material doses in form of mother tinctures may be necessitated. While treating a patient for acute asthma exacerbation more particularly a child, the physician has to be cautious because sometimes nebulization, oxygen administration, rehydration even hospitalization of the patient may be warranted. Never overlook danger signs like flaring (fanning) of nostrils, worsening of symptoms despite medications, racing pulse (fast heartbeat), sucking in of chest or stomach with each breath, blue/gray color of lips & tongue (cyanosis), high fever, oliguria / anuria, dehydration etc.

To prevent subsequent recurrence of asthma exacerbations remains a big challenge. To physician's great solace, during asymptomatic period patient is comfortable, conveniently expressive and can afford to give reasonable time. Prevention of subsequent recurrence of asthma exacerbations warrants prescribing on totality of symptoms, consideration of constitutional aspect, even significant and eventful past, personal or family history require to be given due weightage.

19 Global initiative for asthma. Pocket guide for health professionals, updated 2015[Internet].2015. Available from:ginasthma.org/wp-content/uploads/2016/01/GINA_Pocket_2015.pdf

There are several research conducted across the globe which provides evidence for role of homoeopathic medicines in bronchial asthma.[20-27] There are around 149 medicines for asthma in Kent's repertory which may help in relief of symptoms of bronchial asthma. Medicines like. ***Aralia racemose:*** Asthma lying down at night with spasmodic cough worse after first sleep. ***Blatta orientalis:*** Asthma with or after bronchitis, phthisis. ***Eriodyction californicum (Yerba santa):*** Wheezing asthma with coryza and mucus secretions, easily raised bronchial secretions, giving relief. ***Grindelia Robusta:*** Asthma from heart disease, asthma from catarrhal bronchitis. ***Senega:*** Old asthmatics with congestive attacks, asthmatic bronchitis of old people with emphysema. ***Tylophora Indica:*** In acute attack, patient is better when he lies on left side. Profuse salivation, flatulence, acidity and hypotension. ***Aspidosperma:*** Digitalis of lungs. It is good for dyspnea attacks of cardiac origin.

Indications of some commonly prescribed medicine for bronchial asthma are as follows:[28,29]

Medicines	General indications	Characteristic particulars
Ipecacuanha	*Hot patient; Oversensitive to heat and cold, increased salivation; thirstless with clean tongue; worse from vomiting; irritable, holds everything in contempt*	• Asthmatic cough especially of children • Rattling cough worse in warm moist weather • Severe cough associated with retching, vomiting, stiffness and cyanosis • Continuous wheezing with cough • Chest full of phlegm but no expectoration

20 CCRH. Monograph on Bronchial Asthma. New Delhi: CCRH;2016.

21 Sharma B, Narula RH, Manchanda. Homoeopathy for the management of Asthma - A review of Council's Clinical Research. Indian Journal of Research in Homoeopathy. 2015; 9(2): 69-78.

22 Hotta M, Adler C U, Cesar de Toledo, Martinez EZ, Demarzo MMP. Homeopathy for Perennial Asthma in Adolescents: Pilot Feasibility Study Testing a Randomised Withdrawal Design .Homeopathy;2018.

23 Ostermann JK, Witt CM, Reinhold T. A retrospective cost-analysis of additional homeopathic treatment in Germany: Long-term economic outcomes. PLoS One. 2017;12(9):e0182897.

24 Rossi E, Picchi M, Bartoli P, Panozzo M, Cervino C, Nurra L .Homeopathic therapy in pediatric atopic diseases: short- and long-term results.Homeopathy.2016;105(3):217-224.

25 Shafei HF, AbdelDayem SM, Mohamed NH. Individualized homeopathy in a group of Egyptian asthmatic children. Homeopathy. 2012;101(4):224-30.

26 Gründling C, Schimetta W, Frass M. Real-life effect of classical homeopathy in the treatment of allergies: A multicenter prospective observational study. Wien Klin Wochenschr. 2012;124(1-2):11-7.

27 Qutubuddin M, Singh SM, Nayak C, Koley M, Saha S. Efficacy of individualized homeopathy in bronchial asthma in adults: Double-blind, randomized, placebo-controlled, clinical trial in the context of usual care. Advances in Integrative Medicine.2019; 6(2):58-65.

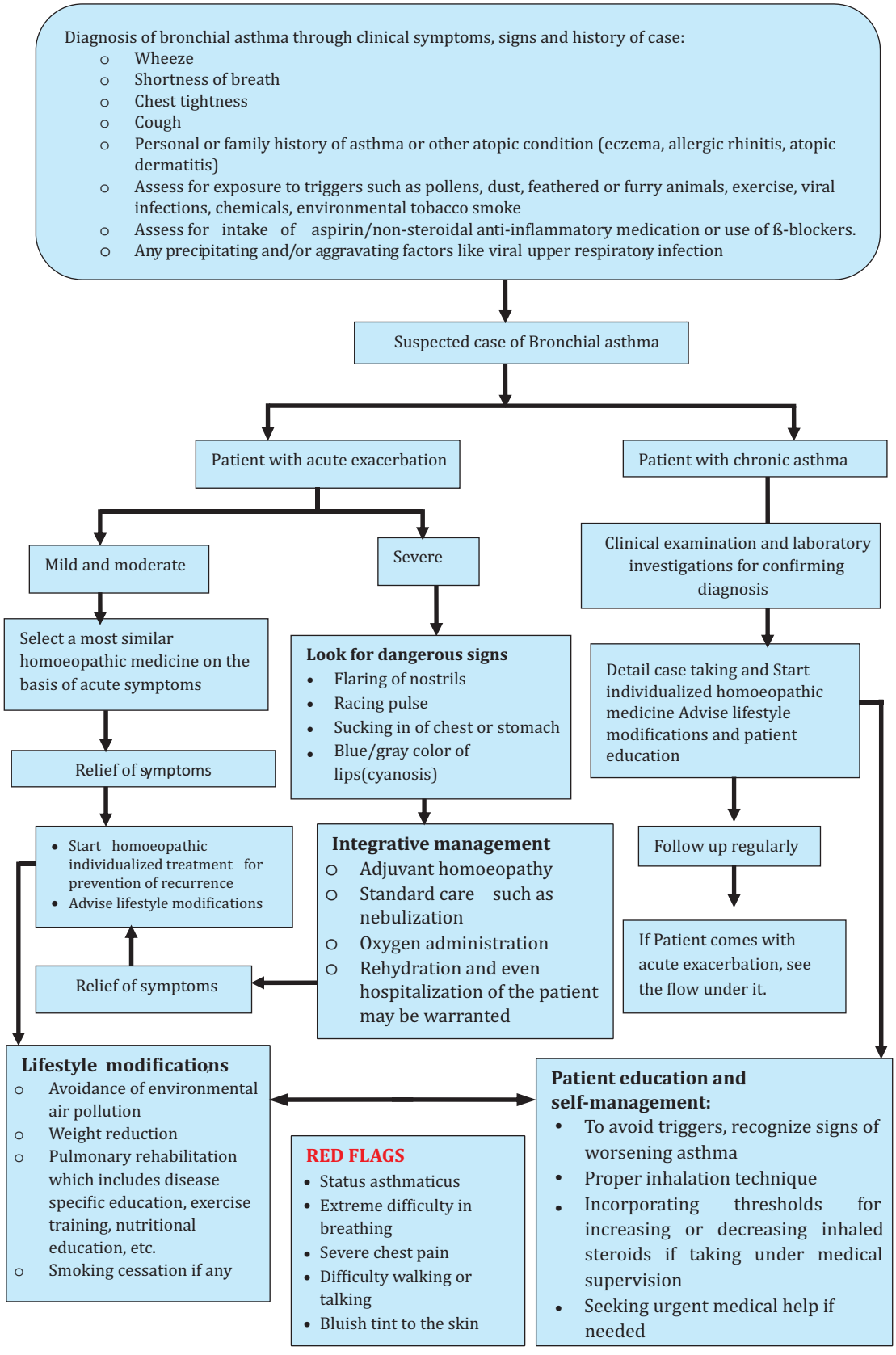
28 Allen H C. Keynote & characteristics with comparison of some of the leading remedies of Materia medica. New Delhi Jain publishers; 1997.

29 Boerick W. Boericke's new manual of Homoeopathic Materia medica with repertory. New Delhi: B Jain publishers;2007.

Medicines	General indications	Characteristic particulars
Arsenicum album	*Chilly patient; weak, rapid disproportionate prostration; burning pains > by heat (except headache) increased thirst; drinks often but little at a time; anxiety restlessness fretful wants to be carried*	• Suffocative cough; gasping for air • Annual attacks of asthma • Asthma, worse 12 am to 2 am • Asthma, better by sitting upright • Dyspnoea better by sitting upright or bent forward. • Sensation as if the lungs were full of smoke or dust.
Antimonium tartaricum	*Hot patient drowsy debilitated and sweats profusely; craving for apples; tongue coated thick white; thirstless; overwhelming sleepiness*	• Cough worse drinking cold drinks, 12 am to 2 am • Bad effects of vaccination, warm damp cold weather; from sour things and milk • Cough with overwhelming sleepiness • Cough is wet and rattling but scantily productive • Cough worse winter, wet weather • Dyspnoea better by eructation, expectoration, better lying on right side
Natrum sulphuricum	*Hot patient; extreme desire for fat; < in damp, cold weather; tendency for early morning diarrhoea; irritable in morning, dislike to speak or to be spoken to*	• Ailments from living in damp basements, getting wet, eating watery citrus fruits, exposure to seaside; grief • Asthma of damp rainy cold weather with early morning diarrhoea • Must hold the chest while coughing • Asthma worse 4-5 a.m., lying on left side better in dry weather, changing position, sitting up and holding the chest
Kali carbonicum	*Chilly patient; puffiness, weakness, backache and profuse perspiration; < in the morning 2-4 a.m.; excessive flatulence; distended stomach as if it would burst*	• Spasmodic cough with gagging or vomiting of ingesta • Paroxysmal cough, loosens viscid mucus which must be swallowed • Asthma worse at 2-4 a.m. or at 3 am; better sitting up, resting

Medicines	General indications	Characteristic particulars
		elbows on the knees, lying propped up • Dry cough with scanty tenacious expectoration, worse at 3 am and after eating
Lobelia inflata	*Fleshy, light hair; nausea with constant salivation, cold sweat and prostration; anxiety about health; worse from cold and cold drafts; change of temperature; cold breathing, fears death from respiratory disease*	• Psychogenic dyspnoea; patient panics, but lungs sound normal • Dyspnoea from constriction of the chest, worse any exertion; better walking rapidly • Asthmatic attack with weakness felt in the pit of the stomach, preceded by prickling all over the body, even in fingers and toes
Ammonium carbonicum	*Stout, fleshy women who are always tired and weary, take cold easily, suffer from cholera-like symptoms before menses, lead a sedentary life, have a slow reaction generally, and are disposed to frequent use of the smelling-bottle*	• Ailments from exposure to cold, stormy, wet weather • Chest feels oppressed during breathing, worse after any effort, and entering a warm room or ascending even a few steps • Chronic asthma, especially when attended with disposition to hydrothorax with shortness of breath, when ascending even a few steps, better open air
Psorinum	*Extremely chilly patient, wants to cover even in hottest summer weather; pale, delicate, sickly; scanty perspiration; offensive discharges; wakes up at night feeling hungry; anxious, fearful, child is good all - day while restless and troublesome at night*	• Asthma, dyspnoea: worse in open air, sitting up; better lying down and keeping arms stretched far apart; despondent, thinks he will die • Cough returns every winter; worse open air, cold and cold drinks

ALGORITHM OF TREATMENT PROCESS FOR BRONCHIAL ASTHMA


Diagnosis of bronchial asthma through clinical symptoms, signs and history of case:
Wheeze
Shortness of breath
Chest tightness
Cough
Personal or family history of asthma or other atopic condition (eczema, allergic rhinitis, atopic dermatitis)
Assess for exposure to triggers such as pollens, dust, feathered or furry animals, exercise, viral infections, chemicals, environmental tobacco smoke
Assess for intake of aspirin/non-steroidal anti-inflammatory medication or use of ß-blockers.
Any precipitating and/or aggravating factors like viral upper respiratory infection
Suspected case of Bronchial asthma
Patient with acute exacerbation
Patient with chronic asthma
Mild and moderate
Severe
Clinical examination and laboratory investigations for confirming diagnosis
Select a most similar homoeopathic medicine on the basis of acute symptoms
Look for dangerous signs
Flaring of nostrils
Racing pulse
Sucking in of chest or stomach
Blue/gray color of lips(cyanosis)
Detail case taking and Start individualized homoeopathic medicine Advise lifestyle modifications and patient education
Relief of symptoms
Start homoeopathic individualized treatment for prevention of recurrence
Advise lifestyle modifications
Integrative management
Adjuvant homoeopathy
Standard care such as nebulization
Oxygen administration
Rehydration and even hospitalization of the patient may be warranted
Follow up regularly
Relief of symptoms
If Patient comes with acute exacerbation, see the flow under it.
Lifestyle modifications
Avoidance of environmental air pollution
Weight reduction
Pulmonary rehabilitation which includes disease specific education, exercise training, nutritional education, etc.
Smoking cessation if any
RED FLAGS
Status asthmaticus
Extreme difficulty in breathing
Severe chest pain
Difficulty walking or talking
Bluish tint to the skin
Patient education and self-management:
To avoid triggers, recognize signs of worsening asthma
Proper inhalation technique
Incorporating thresholds for increasing or decreasing inhaled steroids if taking under medical supervision
Seeking urgent medical help if needed

Chapter 6

CANCER

CANCER

CASE DEFINITION[1]

Cancer may be regarded as a group of diseases characterized by an abnormal growth of cells, ability to invade adjacent tissues and even distant organs and eventual death of the affected patient if the tumor has progressed beyond that stage when it can be successfully removed. Cancer can occur at any site of the body and may involve any type of cells.

INCIDENCE/PREVALENCE[2]

- Cancer is a leading cause of death worldwide, accounting for 8.2 million deaths in 2012.
- The incidence of cancer cases is estimated to increase from 6.1 million in 2008 to 10.6 million in 2030, due to ageing and growing populations, lifestyle and socioeconomic changes.
- The Indian scenario of cancer as per the Globocon 2012 reflected an estimation of 1.1 million new cancer cases in the country, indicating as a single country contributing to 7.8% of the global cancer burden; mortality figures were 682830, contributing to 8.33% of global cancer deaths; the five-year prevalence was 1.8 million individuals with cancer corresponding to 5.52% of global prevalence.

AETIOLOGY/RISK FACTORS[1,3]

As with other chronic diseases, cancer has multifactorial etiology.

1. **Environmental factors**
   a) **Tobacco:** In various forms of its usage (e.g., smoking, chewing) is the major environmental cause of cancers of the lung, larynx, mouth, pharynx, esophagus, bladder, and pancreas.
   b) **Alcohol:** Excessive intake of alcoholic beverages is associated with esophageal and liver cancer.
   c) **Dietary factors:** Smoked fish is related to stomach cancer, beef consumption to bowel cancer, and a high fat to breast cancer. A variety of other factors such as food additives and contaminants have fallen under suspicion as causative agents.
   d) **Occupational exposure:** These include exposure to benzene, arsenic, cadmium, chromium, vinyl chloride, asbestos, polycyclic hydrocarbons. The risk of occupational exposure is considerably increased if the individuals also smoke cigarettes.
   e) **Viruses -** Viruses are causally related to cancers. Example: Hepatitis B and C virus (Hepatocellular virus), Epstein barr virus (Nasopharyngeal virus, Burkitt's lymphoma), Human Papilloma virus (Carcinoma cervix)

---

1 Park K. Park's Textbook of Preventive and Social Medicine. 19th edition. Jabalpur: Banarsidas Bhanot Publisher; 2007. Chapter 6; p.318-27.

2 Saranath D, Khanna A. Current Status of Cancer Burden: Global and Indian Scenario. Biomed Res J 2014;1(1):1-5.

3 Andreeff M, Goodrich DW, Pardee B A. Cell Proliferation and Differentiation. In: Kufe DW, Pollock RE, Weichselbaum RR, et al. editors. Holland-Frei Cancer Medicine. 6th edition. Hamilton (ON): BC Decker; 2003.

f) **Parasites -** Schitosomiasis produces carcinoma of bladder.

g) **Customs habits and lifestyles -** To the above causes must be added customs habits and lifestyles of people which may be associated with an increased risk for cancers. The familiar examples are demonstrated, association between smoking and lung cancer, tobacco and betel chewing and oral cancer, etc.

h) **Others -** There are numerous other environmental factors such as sunlight, radiation, air and water pollution, medications (e.g., estrogen) and pesticides which are related to cancer.

2. **Genetic Factors**

a) Retinoblastoma occurs in children of the same parent.

b) Mongols are likely to develop cancer (leukemia) than normal children.

There is a probability of a complex interrelationship between hereditary susceptibility and environmental carcinogenic stimuli in the causation of a number of cancers.

DIAGNOSIS

Warning signs of common cancers[1]

a. A lump or hard area in breast

b. A change in a wart or mole

c. A persistent change in digestive and bowel habits

d. A persistent cough or hoarseness

e. Excessive loss of blood at the monthly period or loss of blood outside the usual dates

f. Blood loss from any natural orifice

g. A swelling or sore that doesn't get better

h. Unexplained loss of weight.

Clinical Presentation[4,5]

A standard workup including a medical history; physical examination; and laboratory studies, including liver and renal function tests, haemogram and chest x-ray are essential for diagnosis of Cancer.

The first step in diagnosis includes a medical history with detailed signs and symptoms. When patients cope with cancer, fear, worry, and sadness are expected and normal. The most common form of distress in patients with cancer is anxiety and depression.

The signs and symptoms can be elucidated in following manner:

4 Ploman PN. People with cancer. In: Swash M, G lynn Michael, Hutchinson Clinical Methods: An Integrated Approach to Clinical Practice. 22nd Edition, Elsevier Ltd;2007: 456 - 8.

5 Longmore M, Wilkinson IB., Davidson EH, Foulkes, Mafi AR. Oncology and Palliative care: Oxford Handbook of Clinical Medicine. 8th edition. United States: Oxford University Press. Inc.: 526.

a) *Signs and symptoms pertaining to individual cancer sites:*

Although the general signs of early cancer may be very subtle but that of advanced cancer include asthenia, cachexia and a general appearance of fatigue and ill health. Site-specific signs include the following:

1. Lung malignancy:

Symptoms	Signs
• Cough (irrepressible cough may be a feature of a mass obstructing a major airway) • Sputum (may be productive or non-productive) • Breathlessness • Hemoptysis • Pain in chest (a cardinal chest symptom)	• Clubbing • Nicotine staining • Cyanosis • Lower brachial root signs, Horner's syndrome
Note: The symptoms should be described as to their onset, timing, severity etc.	

2. Breast malignancy:

Symptoms	Signs
• Mass • Nipple discharge • Ulceration	• Skin discoloration and tethering • Inflammation • Lymphadenopathy
Note: Lump, pain, nipple discharge, relationship of symptom to menstrual cycle and previous breast history should be considered during case history.	

3. Gastrointestinal malignancy:

Symptoms	Signs
• Dysphagia (at what level does the food stick?, related to which type of food; solid verses liquid) • Indigestion • Abdominal pain (colicky or waxing, waning, with loud bowel sounds or constant. Where in the abdomen does the pain occur? Loud bowel sounds) • Nausea and vomiting (when it occur and what is its relation to foods) • Haematemesis • Melena • Rectal bleeding	• Glossitis • Anemia • Guarding • Jaundice and ascites • Epigastric mass and tenderness • Palpable colonic mass • Hepatomegaly and hepatic failure

4. **Urological Malignancy:**

Symptoms	Signs
• Dysuria • Frequency • Incontinence • Hematuria • Prostatism	• Abdominal and pelvic mass • Rectal prostatic mass • Penile or vulval ulceration • Testicular mass • Hard prostatic mass
Note: Obstructive urinary symptoms e.g., hesitancy, slow flow, frequency, pelvic pain should be considered in males. These may be a sign of mass growth in genitourinary system.	

5. **Gynaecological Malignancy:**

Symptoms	Signs
• Vulval pruritus • Vaginal discharge • Vaginal bleeding (timing of bleeding: inter-menstrual, postmenopausal, after coition etc.) • Pelvic pain • Bleeding	• Vulval ulceration • Cervical mass • Pelvic mass • Mass, discharge

6. **Head and Neck Malignancy:**

Symptoms	Signs
• Taste and swallowing disturbed • Hearing and voice abnormal • Bleeding • Persistent Cough	• Ulceration • Discharge • Cranial nerve palsies • Lymphadenopathy

7. **Ear / Nose / Throat malignancy:**

Symptoms	Signs
• Odynophagia (pain, difficulty or pain on swallowing) • Deafness (conductive verses neuronal- distinguished by Weber and Rinnie test) • Hoarse voice/dysphonia • Blocked nose, nasal discharge (?bloody), sputum (?bloody)	• Lump or ulcer
Note: These are all symptoms that need to be run down to their origin and lead to further investigation.	

8. **CNS Malignancy:**

Symptoms	Signs
• Headache and vomiting (suggestive of raised intracranial; pressure) • Convulsions (late onset epilepsy) epilepsy) • Loss of function	• Mental function • Focal neurological signs (particularly suggestive of a single focus in the brain)
Note: In all the above it is the nature of the progression of symptoms (fast or slow, waxing and waning, intermittent or inexorable) that may be important in differential diagnosis: • Stroke- fast onset • Multiple sclerosis- waxing and waning • Tumors- inexorable progression	

9. **Primary Endocrine Malignancy:**

Symptom	Signs
• Hoarseness • Headache, sweats • Palpitations, nausea • Hypoglycemic coma and history of dyspepsia • Polyuria, polydipsia • Visual field loss • Fatigue	• Thyroid mass • Hypertension, oedema • Adrenal mass, pallor, hypertension • Pancreatic mass • Phaeochromocytoma • Pituitary mass • Hypopituitarism • Buccal pigmentation of hypo adrenalism

b) Signs and symptoms pertaining to oncological emergencies:[1]

- **Febrile neutropenia -** When neutrophil count ≤ 1.0×10^{9}/L.
- **Spinal cord compression -** Back pain with a root distribution, weakness and sensory loss (a level may be found), bowel and bladder dysfunction.
- **Superior vena cava (SVC) obstruction with airway compromise -** Dyspnoea; orthopnoea; swollen face & arm; cough; plethora/cyanosis; headache; engorged veins.
- **Hypercalcaemia -** Lethargy, anorexia, nausea, polydipsia, polyuria, constipation, dehydration, confusion, weakness. Most obvious with serum Ca^{2+} >3mmol/L.
- **Raised intracranial pressure -** Headache (often worse in the morning), nausea, vomiting, papilloedema, fits, and focal neurological signs.
- **Tumour lysis syndrome -** Rapid cell death on starting chemotherapy for rapidly proliferating leukaemia, lymphoma, myeloma, and some germ cell tumors can result in a rise in serum urate, K+, and phosphate, precipitating renal failure.

INVESTIGATIONS[4,5,6]

Diagnostic imaging at various cancer sites is given below. The confirmed diagnosis of cancer almost relies on the histological examination of the tumor either biopsy or resection specimen; this is called the tissue diagnosis.

Diagnostic imaging at various cancer sites:

Lung

- Bronchoscopy
- Chest X-ray and Computed tomography (CT) scan staging

Breast

- Mammography
- Ultrasound
- Magnetic resonance Imaging (MRI) scan, CT body and bone scan

Colorectal

- CT scan diagnosis and staging
- Colonoscopy
- Barium enema

Pancreatic and biliary

- Endoscopic ultrasound
- CT scan staging
- Endoscopic and MR cholangiography

Gastro-esophageal

- Endoscopic ultrasound
- CT scan staging
- Barium swallow

Urological

- IVU
- Cystoscopy
- Trans rectal ultrasound
- MRI and CT staging

Gynecological

- Abdominal and transvaginal ultrasound
- Colposcopy and hysteroscopy
- MRI and CT scan staging

6 Seymour G, Wang M, Pei L, Weber D. Lymphoma and Myeloma. In: Kantarjian H. M., Wolff R. A., Charlesa K. The M D Anderson Manual of Medical Oncology. 2nd edition Part II Tata Mc Graw-Hill Publishing Company Ltd; 2007.

Head and Neck

- Nasal endoscopy
- MRI or CT scan staging
- PET scan

Ear/Nose/Throat

- Endoscopy (direct or indirect via mirror/endoscope)

CNS

- MRI scanning

Endocrine

- MRI and CT staging

Bone, thyroid and carcinoid

- Radionuclide scan

Tumor Markers[7]

Tumors markers are rarely sufficiently specific to be of diagnostic value. Their main value is in monitoring the course of an illness and the effectiveness of treatment.

- **Alfa-fetoprotein (AFP):** Increased in hepatocellular carcinoma, germ cell tumors (not pure seminoma). Also raised in hepatitis, cirrhosis, pregnancy, open neural-tube defects.
- **CA 125:** Raised in carcinoma of the ovary, uterus, breast, and hepatocellular carcinoma. Also raised in pregnancy, cirrhosis, and peritonitis.
- **CA 15-3:** Raised in carcinoma of the breast and benign breast disease.
- **CA 19-9:** Raised in colorectal and pancreatic carcinoma, and cholestasis.
- **CA 27-29:** Raised in breast carcinoma, with better sensitivity and specificity than CA 15-3, being raised in 1/3 women with early breast cancer.
- **Carcino-embroyonic antigen (CEA):** Raised in gastric neoplasms, especially colorectal CA. Also, cirrhosis, pancreatitis, and smoking.
- **Human chorionic gonadotrophin (β-HCG):** Raised in pregnancy and germ cell tumors. For hydatidiform moles and choriocarcinoma.
- **Human epidermal growth factor receptor 2 (HER-2/ NEU):** Over expression of the HER-2 gene in breast cancer carries a worse prognosis but may be targeted with the monoclonal antibody trastuzumab (Herceptin). Also, in ovarian, stomach & uterine ca.
- **Neuron-specific enolase (NSE):** Increased in small-cell lung cancer and neuroblastoma.
- **Monoclonal immunoglobulins:** It is raised in multiple myeloma one class of immunoglobulins is produced in excess, whereas the other immunoglobulins (Ig) are depressed.

7 Longmore M, Wilkinson IB, Davidson EH, Foulkes, Mafi AR. Oncology and Palliative care: Oxford Handbook of Clinical Medicine. 7th edition. United States: Oxford University Press. Inc.: 680.

- **Placental alkaline phosphatase (PLAP):** Increased in pregnancy, seminoma, smoking.
- **Prostate Specific Antigen (PSA):** A marker of prostate cancer, PSA is (unfortunately) also raised in benign prostate hyperplasia.

STAGING OF CANCER[8]

Staging of cancers is based on the size of the primary lesion, its extent of spread to regional lymph nodes, and the presence or absence of metastases. This assessment is usually based on clinical and radiographic examination (CT and MRI) and in some cases surgical exploration.

Two methods of staging are currently in use: the TNM system (T, primary tumor; N, regional lymph node involvement; M, metastases) and the AJC (American Joint Committee) system. In the TNM system, T1, T2, T3, and T4 describe the increasing size of the primary lesion; N0, N1, N2, and N3 indicate progressively advancing node involvement; and M0 and M1 reflect the absence or presence of distant metastases. In the AJC method, the cancers are divided into stages 0 to IV, incorporating the size of primary lesions and the presence of nodal spread and of distant metastases.

EVALUATION AND ASSESSMENT

Patients under treatment for cancer can be assessed symptomatically at clinics using the questionnaires given below:

a) Edmonton Symptom Assessment System[9] (ESAS)

b) EORTC Quality of Life Questionnaire to assess the quality of life of cancer patients[10]

MANAGEMENT

General management

Management of cancer is a challenging issue in all the systems of medicine.[1,3,5] Vast majority of people tend to bear some mark of cancer and/ or its treatment and a large number of people experience long term consequences that include medical problems, psychosocial dysfunction, economic hardships, sexual dysfunction, difficulty in employment etc.[11] The goal of cancer management should be to take care of all such aspects and improve quality of life of cancer survivors.

Communication forms the first step in understanding, treating, or coming to terms with cancer. A range of overwhelming feelings can surface on receiving this diagnosis, including shock, numbness, denial, panic, anger and resignation ("I knew all along..."). A more positive approach is required to benefit and motivate patient through listening to, and addressing, their worst fears. Counseling for anxiety and depression along with treatment is important.

---

8 Kumar A, Fausto M. Robbins Basic Pathology 8th edition. Elsevier Ltd. Chapter 6: Neoplasia: p. 219.

9 Bruera E, Kuehn N, Miller MJ, Selmser P, Macmillan K. The Edmonton Symptom Assessment System (ESAS): a simple method of the assessment of palliative care patients. Journal of palliative care 1991; 7(2): 6-9.

10 EORTC Quality of Life Department, Brussels, BELGIUM, [Internet] [cited 2016 May 31] Available from: https://qol.eortc.org/questionnaire/eortc-qlq-c30/

11 Freter CE, Longo DL. Late consequences of cancer and its treatment. In: Fauci AS, Braunwald E, Kasper DL, Hauser SL, Longo DL, Jameson JL, et al., editors. Harrison's principles of internal medicine. 18th ed. New York: McGraw Hill; 2012: p 838-43.

Guidelines on Nutrition and Physical Activity[12] along with nutritional assessment for survivors should begin soon after diagnosis and should take into consideration treatment goals (curative, control, or palliation) while focusing on both the current nutritional status and anticipated nutrition-related symptoms. For many long-term cancer survivors, weight management, a healthful diet, and a physically active lifestyle should be aimed to prevent recurrence, secondary cancers, and other chronic diseases. The goal is to achieve and maintain healthy weight. The patient should be encouraged to engage in regular physical activity, aim should be to exercise at least 150 minutes per week.

Homoeopathic management

Broadly cancer patients seek homoeopathic treatment either as a primary treatment modality or as an integrative approach where the patient takes both the conventional and homoeopathic treatment for better management of their illness. Homoeopathy treatment can be beneficial in precancerous conditions, early stages of cancer and even in terminal cases of cancer as add on therapy to conventional care. The treatment can provide symptomatic relief, improve in quality of life, pain management and control metastasis to other organs.

Treatment approach also depends upon cell type, location and size of tumor, extent of disease, physiological and psychological status and other accessory symptoms of each patient. Physician should inform the patient about the scope and limitations of the treatment (conventional and homoeopathic system) and disease prognosis.

Clinical studies indicate that homoeopathy either standalone or in combination with conventional care can improve quality of life, reduce symptom burden, and possibly improve survival in patients with cancer and thus can be used as integrative management therapy. A few pre-clinical research studies with homoeopathic medicines have identified the anticancer role and delineated the detailed molecular mechanism(s) underlying their apoptogenic effect.[13,14,15] The findings from several research

12 Simone C. B. Cancer & Nutrition. Revised and Expanded edition. Avery Publishers; 1991

13 Saha S, Bhattacharjee P, Guha D, Kajal K, Khan P, Chakraborty S, Mukherjee S, Paul S, Manchanda R, Khurana A, Nayak D, Chakrabarty R, Sa G, Das T. Sulphur alters NFκB-p300 cross-talk in favour of p53-p300 to induce apoptosis in non-small cell lung carcinoma. Int J Oncol. 2015;47 (2):573-82.

14 Saha S, Bhattacharjee P, Mukherjee S, Mazumdar M, Chakraborty S, Khurana A, et al. Contribution of the ROS-p53 feedback loop in thuja-induced apoptosis of mammary epithelial carcinoma cells. Oncology reports. 2014;31(4):1589-98.

15 Saha S, Sakib Hossain DM, Mukherjee S Mohanty S, Mazumdar M, Mukherjee S, et al. Calcarea carbonica induces apoptosis in cancer cells in p53-dependent manner via an immuno-modulatory circuit. BMC Complementary and Alternative Medicine. 2013; 13:230.

studies [16-29] and homoeopathic literature[30-35] suggest the beneficial effect of homeopathy in cancer care as an adjunctive treatment and to some extent as standalone treatment in pre-cancerous or early stages.

There are about 168 remedies mentioned in Synthesis Repertory for cancerous affections. Constitutional remedies, nosodes, Indian drugs and organ-specific remedies may be indicated as per prescribing totality. A few remedies are enlisted below are known for their beneficial role in specific cancers which can be prescribed when indicated. ***Nitric acid:*** Cancer of cervix. ***Lapis albus:*** Cancer of uterus. ***Ornithogalum umbellatum:*** Cancer of intestinal tract, especially of the stomach and caecum. ***Cadmium sulphuratum:*** carcinoma ventriculi with persistent coffee ground vomiting. ***Asterias rubens:*** Cancer of breast. ***Euphorbinum officinarum:*** Pains of cancer and metastasis; ulcerating carcinoma and epithelioma of the skin. ***Hekla lava:*** tumors in general; osteosarcoma.

16 Rajendran ES. Homoeopathy as a supportive therapy in cancer. Homeopathy. 2004; 93(2): 99-102.

17 Schlappack O. Homeopathic treatment of radiation-induced itching in breast cancer patients. A prospective observational study. Homeopathy. 2004; 93 (4): 210-5.

18 Thompson EA, Reilly D. The homeopathic approach to the treatment of symptoms of oestrogen withdrawal in breast cancer patients: a Prospective observational study. Homeopathy. 2003; 92(3):131-4.

19 Rostock M, Naumann J, Guethlin C, Guenther L, Bartsch HH and Walach H. Classical homeopathy in the treatment of cancer patients - a prospective observational study of two independent cohorts. BMC Cancer. 2011; 11:19.

20 Kulkarni A, Nagarkar BM, and Burde GS. Radiation protection by use of homoeopathic medicines. Hahnemann Homoeopath Sandesh. 1988; 12(1): 20-3.

21 CCRH Clinical evaluation of homoeopathic medicines along with Iscador therapy in managing malignant diseases. Clinical Research Studies -Series III. New Delhi: CCRH. 2010: 24-35.

22 Gaertner K, Müllner M, Friehs H, Schuster E, Marosi C, Muchitsch I, Frass M, Kaye AD. Additive homeopathy in cancer patients: Retrospective survival data from a homeopathic outpatient unit at the Medical University of Vienna. Complement Ther Med. 2014; 22(2):320-32.

23 Frass M., Friehs H., Thallinger C., Sohal NK, Marosi C, Muchitsch I, et.al. Influence of adjunctive classical homeopathy on global health status and subjective wellbeing in cancer patients - A pragmatic randomized controlled trial. Complement Ther Med. 2015; 23 (3): p.309-17.

24 Frenkel M. Is There a Role for Homeopathy in Cancer Care? Questions and Challenges. Curr Oncol Rep. 2015; 17:43.

25 Pathak S, Multani AS, Banerji P, Banerji. Ruta 6 selectively induces cell death in brain cancer cells but proliferation in normal peripheral blood lymphocytes: A novel treatment for human brain cancer. Oncol Rep. 2003; 23(4):975-82.

26 Victoria Claramunt Palou. Observational Study: Cancer Cases Treated with Homeopathy in the Basque Country/Navarre between 2013 and 2015. J Complement Med Alt Healthcare. 2018; 8(1): 555726. DOI: 10.19080/JCMAH.2018.08.555726.

27 Längler, A. Spix, C. Edelhäuser, F. Kameda, G. Kaatsch, P. Seifert. G.Use of Homeopathy in Pediatric Oncology in Germany. Evidence-Based Complementary and Alternative Medicine; 2011. Available from: https://doi.org/10.1155/2011/867151

28 Pal SK. Homeopathic Medicine and Palliative Cancer Care: A Case Report. Science, Technology and Arts research journals. 2013;2(1):60-63.

29 Frass M, Lechleitner P, Gründling C, Pirker C, Grasmuk-Siegl E, Domayer J, et al. Homeopathic Treatment as an Add-On Therapy May Improve Quality of Life and Prolong Survival in Patients with Non-Small Cell Lung Cancer: A Prospective, Randomized, Placebo-Controlled, Double-Blind, Three-Arm, Multicenter Study. Oncologist. 2020;25(12):e1930-e1955.

30 Clarke JH. A Dictionary of Practical Materia Medica. Reprinted edition. New Delhi: B. Jain Publishers (P). Ltd.; 2006.

31 Allen H.C. Keynotes and characteristics with Comparisons of some of the leading remedies of the Materia Medica with Bowel nosodes. Eighth edition. New Delhi. B. Jain Publisher's (P) Ltd.

32 Boericke W. New manual of Homoeopathic Materia Medica with Repertory. New Delhi: B.Jain Publisher's (P) Ltd.

33 Dewey, Willis A. Practical Homeopathic Therapeutics. India. Reprint edition. Chapter : Tumors. New Delhi: B. Jain Publishers Ltd.; 2005 : p 384-88.

34 Lilienthal S. Homoeopathic Therapeutics. Chapter Carcinoma: New Delhi: B Jain Publishers Ltd.; p113-8.

35 Kent J.T. Lectures on Homoeopathic Materia Medica. New Delhi: B. Jain Publishers (P) Ltd.

Indications of a few commonly required homoeopathic medicines for cancer are given below:[25-30]

Medicines	General indications	Characteristic particulars
Arsenicum album	*Chilly patient; rapid disproportionate prostration; burning pains better by heat (except headache); cadaveric odour of discharges and body; anxiety, anguish, fear for death and restlessness*	• Epithelioma of lips; sharp burning pains; extremely sensitive to cold air • Cancer of stomach; with burning paint worse from cold drinks better taking hot drinks • Cancer uterus; burning pain in uterine region, shooting, stinging pains in upper abdomen worse motion
Calcarea carbonica	*Chilly patient; takes cold easily; fat, fair, flabby with large head (children), distended abdomen with red face; weak, easily tired; head sweats profusely while sleeping; tendency to lymphatic glandular enlargement; sour smelling discharges; longing for fresh air; desire for eggs and indigestible things, and indigestible things, aversion to meat and milk; fearful, shy, timid, slow and sluggish*	• Cancerous affections of lymphatic, parotid, sublingual, sub-maxillary glands • Burning and stinging pains where the growth has invaded and appropriated the surrounding tissues • Cold sweat on face; face sallow, pale and cachectic in advanced stages of disease • Predominantly a right sided remedy
Cundurango	*Painful crack in the corner of the mouth is the guiding symptom*	• Painful affections of the stomach; ulceration; vomiting of food and indurations,constant burning pain` • Stricture of oesophagus, with burning pains behind sternum, where food seems to stick • Vomiting of food, and indurations in left hypochondrium with constant burning pain • Fissures form about the muco-cutaneous outlets; epithelioma of lipsoranus • Ulcerative stage of carcinoma cutis when fissures form

Medicines	General indications	Characteristic particulars
Conium maculatum	*Chilly patient, perspires during sleep; desires salt; emotionally closed, flat or hard people, mental dullness or confusion; worse, lying down, turning or rising in bed from taking cold, bodily or mental exertion and better while fasting, in the dark, from letting limbs hang down, motion and pressure. Predominantly right sided affections*	• Found useful in carcinoma breast • Breasts are sore, hard and painful before and during menstruation; tumors, piercing pains; worse, at night
Hydrastis canadensis	*Irritable; disposed to be spiteful. Gloomy, taciturn, disagreeable, discharges; thick, yellowish, ropy secretion; Moaning with occasional outcries from pain. Depression; sure of death and desires it. Worse in cold, dry winds*	• Cancer breast and stomach • In cancer of stomach there is bitter taste and pain as if from a hard cornered substance, all gone sensation, cannot eat bread and vegetables, vomits everything except milk and watermixed; pain in the pit of stomach, emaciation, cancerous cachexia • In Ca Breast, tumor is hard adherent, skin mottled, puckered; cutting like knives in mammae
Lachesis mutus	*Hot patient; thin and emaciated; hemorrhagic diathesis; great sensitiveness to touch; hot flushes and perspiration; all complaints worse after sleep; loquacious, jumps from one idea to another, jealous, suspicious, indolent*	• Melanotic, colloid and encephalitic cancer; ulcers sensitive to touch, with ichorous offensive discharge, blood dark, non-coagulable; violent burning gangrenous spots; cancer of lower lip, dry bleeding • Cancer of stomach, the pit very sensitive to touch, with a gnawing pressure, amelioration by eating, but coming on again in a few hours, and the more violent the emptier the stomach • Cancer of breast with lancinating pains and a constant painful feeling of weakness and lameness in left shoulder and arm; open cancer has a dark, bluish-red appearance, with blackish streaks of decomposed blood

Medicines	General indications	Characteristic particulars
		• Uterine cancer developing itself at climaxis, pains increase rapidly until relieved by profuse discharge of blood
Lycopodium	*Intellectually keen but physically weak; upper part of body emaciated, lower part semi dropsical; complexion pale, dirty sallow with deep furrows; look prematurely old; recurrent respiratory and gastrointestinal affections worse from 4 to 8 p.m.; right sided complaints or symptoms shift from right to left; desires warm foods & drinks, sweets; tendency for flatulent dyspepsia; dominating, cranky, lack of self-confidence, precocious*	• Cancer of Breast: Right breast affected. Swelling of the breasts with nodosities. Excoriation and moist scabs on nipples. Stinging in nipples. Milk in breasts without pregnancy • Pains: aching-pressure, drawing, affects right side, or pain goes from right to left; throat, chest, abdomen, liver, ovaries
Phytolacca decandra	*Fatty; soreness; restlessness; prostration; right sided affections; profound prostration; tendency to glandular indurations and inflammation; worse at night, better in dry warm weather*	• Pre-eminently a glandular medicine. Glandular swellings with heat and inflammation • Indicated in cancerous affections of nose with total obstruction of the nose: when riding, must breathe through the mouth • Cancer of lips: Lower lip drawn down, lips everted • Cancer of breast when the tumor is hard, painful and purple
Thuja occidentalis	*Chilly patient, Dark, Fleshy with greasy face; dark hair and unhealthy skin looks dirty with brownish spots; perspiration on uncovered parts, smells sweetish and strong; Ailments from vaccination. Complaints worse damp, cold, damp humid weather, at night; better by warmth, free secretions, while drawing up a limb, left side. lazy*	• Indicated in cancerous cachexia • Epithelioma, induration and hypertrophy followed by softening • Cauliflower excrescences; medullary and fungoid cancers. Rapid exhaustion and emaciation

Chapter 7

DEPRESSION

DEPRESSION

CASE DEFINITION[1]

Depression is a common mental disorder that presents with a low or depressed mood, loss of interest or pleasure, decreased energy, feelings of guilt or low self-worth, disturbed sleep or appetite, and poor concentration. Moreover, depression often comes with symptoms of anxiety.

INCIDENCE/PREVALENCE[2,3]

- Depression is a common mental disease & about 350 million people are affected worldwide.
- In southeast Asia, around 40.8 million populations suffer from unipolar depression & 7.2 million suffer from bipolar depression.
- The World Health Organization estimates that nearly 1 million people worldwide commit suicide every year, including 170,000 in India and 140,000 in high-income countries.
- Women are 50% more affected than men.

AETIOLOGY & RISK FACTORS[4,5]

- History of depression in close relatives
- History of abuse (any sexual, physical, emotional)/Trauma
- Marital or relationship problems
- Major events; death or loss of a loved one, losing a job, getting divorced, retiring etc.
- Loneliness
- Chronic anxiety
- Persistent anger & irritability
- High-stress levels
- Substance abuse-alcohol & tobacco use
- Multiple somatic complaints
- Postpartum/ during pregnancy/during menopause
- Geriatric age group, especially with loneliness and chronic debilitating illnesses

---

1 Marcus M, Yasamy MT, Ommeren M, Dan C, Saxena S. Depression, A Global Public Health Concern, WHO Department of Mental Health and Substance Abuse.2012[cited 2015 July 13]. Available from http://www.who.int/mental_health/management/depression/who_paper_depression_wfmh_2012.pdf

2 World Health Organization. Depression Fact sheet 2015. Geneva, Switzerland: World Health Organization;2015[cited 2018 March 28]. Available from: http://www.who.int/mediacentre/factsheets/fs369/en/

3 World Health Organization. The Global Burden of Disease: 2004 Update. Geneva, Switzerland: World Health Organization;2008[cited 2015 march 20]. Available from: http://www.who.int/healthinfo/global_burden_disease/GBD_report_2004update_full.pdf

4 Depression in Adults: Diagnosis & Treatment Guideline [cited 2015 Jan 8]. Available at http://healthteamworksmedia.precis5.com/769675d7c11f336ae6573e7e533570ec

5 Bruce DF. Depression Health Center. Causes of Depression. Webmed [cited 2015 Mar 20]. Available at http://www.webmd.com/depression/guide/causes-depression

- Certain medications- drugs, such as Accutane (used to treat acne), the antiviral drug interferon-alpha, and corticosteroids can increase the risk of depression.
- Chronic & serious illnesses-like Cancer, Parkinson's disease, heart disease, diabetes and its complications, etc.
- Other psychiatric disorders- like Schizophrenia, anxiety disorder etc.
- Personalities with fastidious, perfectionist, self-critical traits; melancholic outlook or general pessimistic tendencies.

Types of Depression[6]:

1. **Unipolar depression:-** Involves symptoms such as depressed mood, loss of interest & enjoyment and increased fatigability. Depending upon the number & severity of symptoms, it is further divided into mild, moderate & severe depression.
2. **Bipolar depression:-** It consists of both depressive & manic episodes separated by a period of normal mood. Manic episodes involve elevated mood & increased energy.
3. **Dysthymia:-** A chronic depression of mood, lasting at least several years, which is not sufficiently severe, or in which individual episodes are not sufficiently prolonged, to justify a diagnosis of severe, moderate, or mild recurrent depressive disorder.
4. **Cyclothymia:-** A persistent instability of mood involving numerous periods of depression and mild elation, none of which is sufficiently severe or prolonged to justify a diagnosis of bipolar affective disorder or recurrent depressive disorder.

DIAGNOSIS

ICD-10 criteria for diagnosis[7]

a) First set of symptoms are usual, which include:
   - Depressed mood
   - Loss of interest
   - Reduced energy leading to increased fatigability and diminished activity

b) Second set of common symptoms which include:
   - Reduced self-esteem and self-confidence
   - Reduced concentration and attention
   - Ideas of guilt and worthlessness
   - Bleak & pessimistic views of future
   - Disturbed sleep
   - Diminished appetite
   - Ideas or acts of self-harm or suicide

6 Benazzi F. Various forms of depression. Dialogues Clin Neurosci. 2006;8(2):151-61.

7 AFMC. Standard Treatment Guidelines Medical Management & Costing of Select Conditions; In Collaboration with Ministry of Health & Family Welfare Government of India & WHO Country Office. Pune, India: Armed Forces Medical College; 2007:122-128.

c) At least two of the symptoms of first set and two from the second set for a 2 week period would make a mild depressive episode;

d) At least two of the symptoms of first set and three from the second set for a 2 week period would make a Moderate depressive episode;

e) All three symptoms of first set and at least four from the second set for a 2week period would make a severe depressive episode;

f) All three symptoms of first set and at least four from the second set including delusions, hallucinations and depressive stupor for a 2 weeks' period would make a severe depressive episode with psychotic symptoms;

g) Depressive symptoms of mild and moderate levels persisting for a very long duration (two years as per DSM- IV) constitute the criteria for Dysthymic disorder.

DIFFERENTIAL DIAGNOSIS[7]

- Anxiety disorder
- Personality disorder
- Substance abuse disorder
- Dementia
- Hypothyroidism
- Nutritional deficiency

EVALUATION AND ASSESSMENT[8]

Screening

The patients who present with symptoms of depression should be screened using two quick questions as follows:

In the past 2 weeks

1. Have you lost interest or pleasure which usually you like to do?
2. Have you felt sad, low, down, depressed or hopeless?

If "yes" on either question, then the further assessment should be done using scales developed for assessing it. There are different depressive scales and screening tests for diagnosis of the case. These are as follows:

- PHQ Scale[9]
- Beck's Depressive Index (BDI)[10]
- Hamilton Scale for Depression (HDRS)[11]

---

8 Depression in Adults: Diagnosis & Treatment Guideline.[cited 2015 march 19]. Available at http://healthteamworksmedia.precis5.com/769675d7c11f336ae6573e7e533570ec

9 Kroenke K, Spitzer RL, Williams JBW. The PHQ-9:Validity of a brief depression severity measure. Journal of General Internal Medicine.2001;16(9):606-13.

10 Beck AT, Ward CH, Mendelson M, Mock J, Erbaugh J. An inventory for measuring depression. Archives of General Psychiatry.1961;4(6):561-571.

11 Hamilton M.A rating scale for depression. Journal of Neurology, Neurosurgery & Psychiatry.1960;23:56-61.

RED FLAGS[8]

- Depression with high suicidal risk
- Depression with psychotic feature
- Bipolar depression - The patient is currently depressed, as in a depressive episode of either mild or moderate severity and has had at least one authenticated hypomanic, manic, or mixed affective episode in the past.[12]
- Co-occurring Substances abuse
- Cases which are unresponsive to the treatment

PREVENTION[13]

For the prevention of depression following community approaches should be included:

- Life Skills Programmes addressing concerns of children and adolescents to enhance cognitive, problem-solving and social coping skills.
- School-based awareness programmes for the prevention of child abuse and substance abuse.
- Interventions for parents of children with behavioural problems may reduce parental depressive symptoms and improve outcomes for their children.
- Exercise programmes for the elderly are also effective in the prevention of depression.

MANAGEMENT

General management

Management of depression requires a holistic approach. Its management requires both non-pharmacological and pharmacological methods depending on the condition and severity of depression. The patient should be informed regarding avoidable risk factors of the disease & motivate to take steps for improving their health and wellbeing.[14] Motivational interviewing & empathy help the patient in changing their behaviour regarding disease and do the following things:

- Advice for regular exercise
- Avoid alcohol, tobacco & illicit drugs
- A healthy diet should be taken
- Healthy sleep pattern should be maintained
- Engage in positive activities
- Stress management (Yoga, meditation, Breathing exercise)
- Social support should be given by family

12 ICD10,version2015(cited20thMarch2015).Available:http://apps.who.int/classifications/icd10/browse/2015/en#/F31.3

13 World Health Organization. Depression Fact sheet 2015. 2015 [cited 2015 March 19]. Available at http://www.who.int/mediacentre/factsheets/fs369/en/

14 World Federation for Mental Health. Depression: A Global Crisis, World Mental Health Day, October 10, 2012.World Federation for Mental Health. [cited on 2015 Mar. 19]. Available at http://www.who.int/mental_health/management/depression/wfmh_paper_depression_wmhd_2012.pdf?ua=1

A variety of psychotherapeutic approaches[15] are available for the relief of symptoms or the management of depression. All of these need the services of a specially trained counsellor/ psychotherapist to assess the needs of the patients and plan the nature of the intervention. They are: Cognitive/behavioural therapy (CBT), Interpersonal psychotherapy (IPT), Problem-solving therapy (PST), Psychodynamic therapy and Light therapy. Generally, these interventions are combined with medication to hasten the process of recovery.

Homoeopathic management

Mental symptoms such as depression, anxiety and insomnia are among the common reasons for individuals to seek treatment with complementary therapies in general and homoeopathy in particular. There are few researches[16-26] done on depression using homoeopathic intervention, which directs to its positive effect. Nonetheless, the vast literature and traditional homoeopathic textbooks have plenty of symptoms pertaining to this condition. Homoeopathic medicine, along with counseling and psychotherapies, shall be in help for recovery of the patient.

There are a number of homoeopathic medicines available in homeopathic literatures[27-30] and research papers show evidence of utilization of homoeopathic medicines in depression. Hahnemann has also

---

15 Depression in Adults: Diagnosis & Treatment Guideline. [cited 2015 Mar. 19]. Available at

16 Oberai P, Balachandran I, Nair JKR, Sharma A, Singh V P, Singh V, Nayak C . Homoeopathic management in depressive episodes: A prospective, unicentric, non-comparative, open-label observational Study. Indian Journal of Research in Homoeopathy 2013;7(3):116-125.

17 Katz T, Fisher P, Katz A, Davidson J, Feder G. The feasibility of a randomised, placebo-controlled clinical trial of homoeopathic treatment of depression in general practice. Homeopathy 2005; 94.

18 Nayak C, Singh V, Singh K, Singh H, Gupta J, Lamba CD, et al. Management of distress during climacteric years by homeopathic therapy. J Altern Complement Med. 2011 Nov;17(11):1037-42.

19 Adler UC, Paiva NMP, Cesar A T, Adler M, Molina A, Padula A E, et al. Homeopathic Individualized Q-Potencies versus Fluoxetine for Moderate to Severe Depression: Double-Blind, Randomized Non-Inferiority Trial. Evid Based Complement Alternat Med. 2011;2011:520182.

20 Davidson JR, Morrison RM, Shore J, Davidson RT, Bedayn G. Homeopathic treatment of depression and anxiety. Altern Ther Health Med. 1997 Jan;3(1):46-9.

21 Pilkington K, Kirkwood G, Rampes H, Fisher P, Richardson J.Homeopathy for depression: a systematic review of the research evidence. Homeopathy. 2005 Jul;94(3):153-63.

22 Bensouda L, Abenhaim L, Massol J, Guillemot D, Avouac B, et al. Homeopathic medical practice for anxiety and depression in primary care: the EPI3 cohort study. BMC Complement Altern Med. 2016; 16: 125.

23 Viksveen P, Relton C, Nicholl J. Depressed patients treated by homeopaths: a randomised controlled trial using the "cohort multiple randomised controlled trial" (cmRCT) design.Trials. 2017;18(1): 299.

24 Shukla GS: Effect of Homoeopathic medication on Depression. Int J Pharm Sci Res 2013; 4(12): 4787-97. doi: 10.13040/IJPSR. 0975-8232.4(12).4787-97.

25 Văcăraş V, Vithoulkas G, Buzoianu AD, Mărginean I, Major Z, Văcăraş V, Dan Nicoară R, Oberbaum M. Homeopathic Treatment for Postpartum Depression: A Case Report. J Evid Based Complementary Altern Med. 2017 Jul;22(3):381-384.

26 Moorthi K, P Radhika.Homoeopathic treatment for severe depression with psychotic features: a case report.IJHS.2020;4(1):82-86.

27 Boericke W., Boericke's New Manual of Homoeopathic Materia Medica with Repertory: Third Revised & Augmented Edition based on Ninth Edition. New Delhi: B. Jain Publishers; 2010.

28 Allen HC. Allen's Keynotes- Rearranged and classified with leading remedies of the materia medica and bowel nosodes. 10th Reprint edition. B. Jain Publishers (P) Ltd.; Jan 2006.

29 Clarke JH. A Dictionary of Practical Materia Medica, New issue with additions in three volumes. New Delhi: B. Jain Publishers, 2006.

30 Murphy R . Homeopathic medical repertory.2nd revised edition. New Delhi: B. Jain Publishers ;2006: P 1307.

described the mental disease and its management in Organon of Medicine from aphorism 210 to 230. In synthesis repertory[31], there are around 764 medicines mentioned under rubric sadness (depression). Medicines like. ***Lachesis:*** Used in depression during menopausal age. ***Pulsatilla:*** It is indicated in depression around the time of hormonal changes (puberty, menstrual periods, or menopause). ***Carcinosium:*** They are often employed to treat chronic and serious forms of depression. ***Caladium:*** It is indicated in depression due to impotence. ***Kali phosphoricum:*** They can be used to treat insomnia in depression. ***Arsenicum album:*** It can be given when prolonged anxiety leads to depression. ***Aconite:*** It can be given in acute panic attacks. Indications of some important medicines for depression are given below :

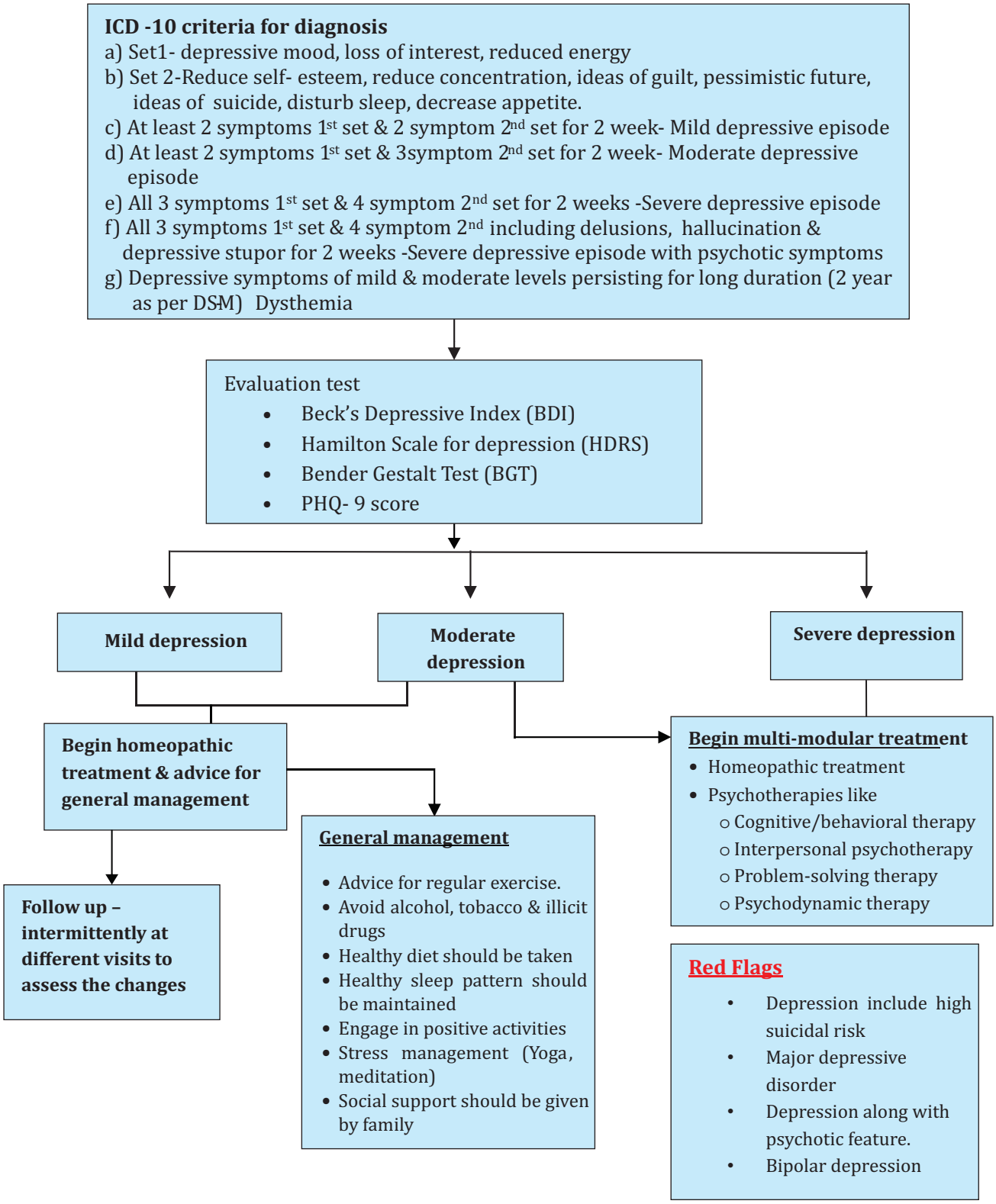
Medicines	General indications	Characteristic mental symptoms related to depression
Aurum metallicum	*Patient is getting worse in cold weather; Many complaints come on only in winter; from sunset to sunrise, abuse of mercury. Better from open air, cold bathing. Depressive, hopeless, constant desire to commit suicide*	• Ailments from grief, disappointed love, business reversals and humiliation • Egotism, haughty and arrogant, Spiritual inclination and desirefor prayer or meditation • Feeling of self - condemnation and utter worthlessness • Anthropophobia. Mental derangements
Ignatia amara	*Marked hyperaesthesia of all the senses, and a tendency to clonic spasms. Great contradiction. Worse in the morning, open air, after meals, coffee, smoking, liquids, external warmth. Better while eating, change of position. Hysteric women, sensitive, easily excited nature women having mild disposition, quick to perceive, rapid in execution*	• Especially suited to nervous temperament; women of a sensitive, easily excited nature • dark hair and skin but mild disposition, quick to perceive, rapid in execution • Remedy of great contradictions persons mentally and physically exhausted by long concentrated grief; moody • Desires to be alone ; cannot bear tobacco; smoking or being in to bacco smoke • Changeable mood; introspective; silent brooding

31 Schroyens F. Synthesis Repertory.ver.9.1; New Delhi:B Jain Publishers Pvt Limited; 2002.

Medicines	General indications	Characteristic mental symptoms related to depression
Kali phosphoricum	*Easy perspiration, sensitivity to cold. Slightest labor seems a heavy task for them. Exhaustion after moderate mental effort. Anemia, insomnia, and indigestion are generally found in this remedy. Generally suited to anxious, nervous & irritable person*	• Indicated in extreme lassitude and depression; exhaustion after moderate mental effort; person is indifferent and captious; loss of memory. Brain fag, hysteria; night terrors. Shyness; disinclined to converse
Natrium muriaticum	*Hot patient; poorly nourished, great emaciation (marked on neck); losing flesh while living well; craving for salt; aversion to bread and fatty things; constipated; increased thirst; mapped tongue with red insular patches; melancholic, sad, plays alone, irritable, cross, cries when spoken to; awkward, hasty, drops things from nervous weakness; disposition to weep without cause, consolation aggravates*	• Melancholic, sad, irritable, cross, cries when spoken to; bad effect of grief, disappointment, anger, fright, vexation & suppression of inner feelings • Becomes angry if someone tries to console them; wants to be alone to cry; anxiety, brooding about past grievances; awkward, hasty, drops things from nervous weakness; disposition to weep without cause; consolation aggravates • Insomnia can also be experienced when the person is depressed
Sepia officinalis	*Chilly patient; tall, thin built with yellow saddle across upper part of cheeks and nose, big belly; dry flabby skin. Predisposed to take cold at change of weather. Desire for sour food which aggravates Cheerful, active when well but indifferen and quarrelsome when sick self-absorbed, sad, weeping and indolent*	• Depression occurring during & after pregnancy; weary, irritable & indifferent to loved one sor family members • Persons worn out by the demands of everyday life, easily offended; dreads to be alone; anxious towards evening
Acid phosphoricum	*Phos. acid is found in young people who grow rapidly, and who are overtaxed, mentally or physically. Debility is very marked in this remedy, producing a nervous exhaustion. Mental debility first; later physical. The system has been exposed to the ravages of acute disease, excesses, grief, loss of vital fluids*	• Depression caused from care, chagrin, grief, sorrow, homesickness • Persons of originally strong constitutions, who have become debilitated by chagrin, or a long succession of moral emotions, as grief, care, disappointed affection

Medicines	General indications	Characteristic mental symptoms related to depression
		• Mental debility first; later physical; mental weakness after grief; amelioration fromsleep • Diarrhoea after grief are other indications of this medicine
Conium maculatum	*Chilly patient, perspires during sleep; desires salt; glandular affection; emotionally closed, flat or hard people, mental dullness or confusion; debility of mind and body; generally aggravation from suppression of sexual desire; the complaints of conium originates slowly and progressively*	• Bad effect from suppression of sexual desire • Excitement causes mental depression • Depressed, timid, averse to society, and afraid of beingalone yet avoids society. No inclination for business or study; takes no interest in anything. Memory weak; unable to sustain any mental effort
Staphysagria	*Sickly; tired; sensitive subjects; Bottled up emotions. Always angry. Easily offended, apathetic indifferent. Nervous affections with marked irritability, diseases of the genito - urinary tract and skin. Worse from anger, indignation, grief, mortification, loss of fluids, onanism, sexual excesses, tobacco; least touch on affected parts. Better after breakfast, warmth, rest at night*	• Ailments from grief; pride,envy or chagrin; for the mental effects of onanism and sexual excesses • Very sensitive to slight mental impressions; least action or harmless words offends • Great indignation about things done by others or by himself; grieves about consequences; apathetic, indifferent, low-spirited, weak memory from sexual abuses; headaches, toothache and stomachache are other pointers to the use of this medicine

ALGORITHM OF TREATMENT PROCESS FOR DEPRESSION


ICD -10 criteria for diagnosis
a) Set1- depressive mood, loss of interest, reduced energy
b) Set 2-Reduce self- esteem, reduce concentration, ideas of guilt, pessimistic future, ideas of suicide, disturb sleep, decrease appetite.
c) At least 2 symptoms 1st set & 2 symptom 2nd set for 2 week- Mild depressive episode
d) At least 2 symptoms 1st set & 3symptom 2nd set for 2 week- Moderate depressive episode
e) All 3 symptoms 1st set & 4 symptom 2nd set for 2 weeks -Severe depressive episode
f) All 3 symptoms 1st set & 4 symptom 2nd including delusions, hallucination & depressive stupor for 2 weeks -Severe depressive episode with psychotic symptoms
g) Depressive symptoms of mild & moderate levels persisting for long duration (2 year as per DSM) Dysthemia
Evaluation test
Beck's Depressive Index (BDI)
Hamilton Scale for depression (HDRS)
Bender Gestalt Test (BGT)
PHQ- 9 score
Mild depression
Moderate depression
Severe depression
Begin homeopathic treatment & advice for general management
Follow up – intermittently at different visits to assess the changes
General management
Advice for regular exercise.
Avoid alcohol, tobacco & illicit drugs
Healthy diet should be taken
Healthy sleep pattern should be maintained
Engage in positive activities
Stress management (Yoga, meditation)
Social support should be given by family
Begin multi-modular treatment
Homeopathic treatment
Psychotherapies like
Cognitive/behavioral therapy
Interpersonal psychotherapy
Problem-solving therapy
Psychodynamic therapy
Red Flags
Depression include high suicidal risk
Major depressive disorder
Depression along with psychotic feature.
Bipolar depression

Chapter 8

DIABETES MELLITUS

DIABETES MELLITUS

CASE DEFINITION[1]

Diabetes mellitus (DM) refers to a group of common metabolic disorders that share the phenotype of hyperglycemia. Several distinct types of DM exist and are caused by complex interactions of genetics and environmental factors. Depending upon the aetiology of DM, factors contributing to hyperglycemia include reduced insulin secretion, decreased glucose utilization, and increased glucose production.

INCIDENCE/PREVALENCE

- According to World Health Organization, the number of people with diabetes has risen from 108 million in 1980 to 422 million in 2014.
- The global prevalence of diabetes among adults over 18 years of age has risen from 4.7% in 1980 to 8.5% in 2014.[2]
- India leads the world with the largest number of diabetic subjects earning the dubious distinction of being termed the "diabetes capital of the world".
- According to the Diabetes Atlas 2006 published by the International Diabetes Federation, the number of people with diabetes in India currently around 40.9 million is expected to rise to 69.9 million by 2025 unless urgent preventive steps are taken.[3]

AETIOLOGY / RISK FACTORS[4,5,6]

1. **Genetic factors:**
    - Genetic defects of the β-cell
    - Genetic defects in insulin action
    - Diseases of the exocrine pancreas
    - Endocrinopathies
    - Drug- or chemical-induced diabetes
    - Infections

---

1 Powers C. A. Diabetes Mellitus. In: Fauci AS, Braunwald E, Kasper DL, Hauser SL, Longo DL, Jameson JL, et al., editors. Harrison's principles of internal medicine. 17th edition. New York: Mc Graw Hill; 2008: p 2275-310

2 World Health Organization. Diabetes factsheet. Geneva, Switzerland: WHO; 2015[cited 13th July 2015] Available from http://www.who.int/mediacentre/factsheets/fs312/en/

3 Mohan V, Sandeep S, Deepa R, Shah B, Varghese C. Epidemiology of type 2 diabetes: Indian scenario. Indian J Med Res. 2007 March;125(3); 217-30

4 Diagnosis and Classification of Diabetes Mellitus; American Diabetes Association; Diabetes Care. 2005 Jan 28: 38-39.

5 Stoppler MC. Diabetes Mellitus; [cited 2015 April 13]. Available from: http://www.medicinenet.com/diabetes_mellitus/page3.htm#what_causes_diabetes last retrieved on date 11/02/2014.

6 Park K. Diabetes Mellitus. Park's Textbook of Preventive and Social Medicine. 20th edition. Jabalpur: Banarsidas Bhanoth Publishers; 2009; 341-3.

2. **Host factors:**
   - Family history of diabetes
   - Impaired glucose tolerance (IGT)
   - History of gestational diabetes
   - Poor nutrition during pregnancy

3. **Environmental factors:**
   - Physical inactivity
   - Stress
   - Excess alcohol
   - Excess smoking
   - High blood pressure

CLASSIFICATION

DM is classified based on the pathogenic process that leads to hyperglycemia, as opposed to earlier criteria such as the age of onset or type of therapy. The two broad categories of DM are Type I and Type II. Other than these, Pre-diabetes or Impaired fasting glucose/Impaired Glucose Tolerance is a commonly identified state in which the blood glucose levels are higher than normal but not high enough to be classified as full-blown diabetes. Patients with these states usually have no symptoms and are diagnosed because a test is done upon the patient's request or because he/she falls into a high-risk category. [1]

Type 1 diabetes (T1DM/ Juvenile onset diabetes)

The diagnosis of T1DM can be made throughout childhood but it is more likely below 15 years of age. The onset is usually acute and severe, and insulin is required for survival. Type 1 diabetes results from autoimmune destruction of the beta cells in the pancreatic islets. A family history of diabetes is rare. The presence of features of associated autoimmunity (autoimmune disorders, vitiligo) and absence of obesity and acanthosis nigricans are characteristics of T1DM. In addition, the urine of T1DM patients with uncontrolled hyperglycemia is positive for ketone bodies.

Type 2 diabetes (T2DM/ Non-insulin dependent diabetes or adult-onset diabetes)

It usually occurs after the age of forty years but occurs frequently even at lower ages among Indians. T2DM was previously known as non-insulin-dependent diabetes mellitus. The onset is usually insidious and may be mild to severe. The family history is usually positive and strong. Obesity, metabolic syndrome, and acanthosis nigricans are usually seen in these patients while there is no evidence of autoimmunity. Further, there is no insulin dependence till late in the course of this illness. The difference between type 1 and type 2 diabetes is given in table 1.

Table 1: Important differentiating features between T1DM and T2DM

	T1DM	T2DM
Age	Bimodal peak i. 5-7 yrs. ii. 14 yrs.	4th decade
Onset	Explosive	Less explosive often incidental detection
Phenotype	Lean	Obese
Signs of Insulin resistance **i. Acanthosis nigricans** **ii. Skin tags**	Absent	Usually, present
Diabetic ketoacidosis	Common	Rare
Auto–immune disorder	Commonly associated	Not associated
Insulin and C-peptide	Low	Normal to low
Drugs	Insulin	Oral drugs and Insulin if required

DIAGNOSIS[4,5]

Clinical presentation

- The early symptoms of untreated diabetes are related to elevated blood sugar levels, and loss of glucose in the urine. High amounts of glucose in the urine can cause increased urine output (polyuria) and lead to dehydration. Dehydration causes increased thirst (polydipsia) and water consumption.
- The inability of insulin to perform normally has effects on protein, fat, and carbohydrate metabolism. Insulin is an anabolic hormone, that is, one that encourages the storage of fat and protein. A relative or absolute insulin deficiency eventually leads to weight loss despite an increase in appetite (polyphagia).
- Some untreated diabetes patients also complain of fatigue, nausea, and vomiting. Patients with diabetes are prone to developing infections of the bladder, skin, and vaginal areas.
- Fluctuations in blood glucose levels can lead to blurred vision. Extremely elevated glucose levels can lead to lethargy and coma.

Symptoms may develop rapidly (weeks or months) in type 1 diabetes, while they usually develop much more slowly and may be subtle or absent in type 2 diabetes. (Table 2)

Table 2: Diagnosis of Diabetes mellitus[4]

1. Symptoms of diabetes plus casual plasma glucose concentrtion ≥200 mg/dl (11.1 mmol/l) €	**NOTE:** Three ways to diagnose diabetes are possible, and each, in the absence of unequivocal hyperglycemia, must be confirmed, on a subsequent day, by any one of the three methods. The use of the haemoglobin A1c (A1C) for the diagnosis of diabetes is not recommended at this time Gestational diabetes (GDM): Standard OGTT is done at 24-28 weeks after an overnight fast (fasting plasma glucose and plasma glucose 2 hours after 75g glucose drink is done). A 2-hour level >=7.8 mmol/L (or 140 mg/dL) is diagnostic of gestational diabetes. If fasting and postprandial blood sugars are elevated in the first trimester, this may indicate preexisting diabetes mellitus (which is considered a different condition, with different implications) Pre - Diabetes or Impaired fasting glucose/Impaired Glucose Tolerance is a commonly identified state in which the blood glucose levels are higher than normal but not high enough to be classified as full-blown diabetes. Patients with these states usually have no symptoms and are diagnosed because a test is done upon patient request or because he/she falls into a high-risk category
Or	
2. FPG ≥126 mg/dl (7.0 mmol/l) Fasting is defined as no caloric intake for at least 8 h.	
Or	
3. 2-h post-load glucose ≥ 200 mg/dl (11.1 mmol/l) during an OGTT*.	
Or	
HbAIc (Glycosylated Haemoglobin) > 6.5%	
According to WHO[7], Intermediate hyperglycemia or pre - diabetes is: **Impaired fasting glucose (IFG) / Fasting Plasma Glucose levels of 110 mg / dl to 125 mg / dl and impaired glucose tolerance (IGT) as 2-h OGTT values of 140 mg/dl to 199 mg/dl**	

€Casual is defined as any time of day without regard to time since the last meal. The classic symptoms of diabetes include polyuria, polydipsia, and unexplained weight loss. *The test should be performed as described by WHO, using a glucose load containing the equivalent of 75 g of anhydrous glucose dissolved in water. In the absence of unequivocal hyperglycemia, these criteria should be confirmed by repeat testing on a different day. The third measure (OGTT) is not recommended for routine clinical use.

INVESTIGATIONS[1,6]

1. Fasting or random blood glucose
2. Oral glucose tolerance test with 75 g glucose load (adults) or 1.75 g/kg body weight in children (if required to confirm the diagnosis)
3. Urine ketones
4. Urine protein

7 World Health Organization. Definition and diagnosis of diabetes mellitus and intermediate hyperglycemia. Report of a WHO/IDF Consultation. World Health Organization 2006. [cited 24.1.2015] Available at: http://apps.who.int/iris/bitstream/10665/43588/1/9241594934_eng.pdf

5. Blood urea, electrolytes, and creatinine
6. Fasting blood lipid profile (adults)
7. Glycated haemoglobin (HbA1c)
8. Complete Blood count
9. Serum fasting Insulin
10. ECG (adults)

Subsequent monitoring

- Blood glucose
  - ➢ Recorded results of regular self-monitoring of fasting and random tests at home by the patient using a glucometer.
  - ➢ Periodic fasting or random tests during clinic reviews
- Glycated haemoglobin (HbA1c)
  - ➢ at least three times a year, if available
- Blood lipid tests
  - ➢ annually, but more frequently if levels are abnormal or on lipid lowering medication
- Blood urea, electrolytes, and creatinine
  - ➢ annually, but more frequently if levels abnormal
- Urine protein
  - ➢ annually

DIFFERNTIAL DIAGNOSIS

- Endocrine disorders - Endocrine tumour causing increased production of growth hormone, glucocorticoids, catecholamines, glucagon, and somatostatin; Addison disease; Grave's disease; Hashimoto thyroiditis; Acanthosis nigricans (genetic disorders with insulin resistance)
- Chronic pancreatitis
- Cystic fibrosis
- Non-diabetic glycosuria
- Renal glycosuria
- Peripheral neuropathy from alcohol abuse or vitamin B-12 deficiency

EVALUATION AND ASSESSMENT [8, 9]

- World Health Organization Quality of Life BREF (WHOQOL-BREF)

8 Mehra Pritha, et al. Efficacy of homoeopathic treatment for diabetic distal symmetric polyneuropathy. 2021. EXPLORE Volume 17, Issue 5, September–October 2021, Pages 417-423.

9 Nayak C, et al. A prospective observational study to ascertain the role of homœopathic therapy in the management of diabetic foot ulcer. American Journal of Homeopathic Medicine 2011; 104(4):166-76.

- Neuropathy Total Symptom Score-6 (NTSS-6)
- Diabetic Neuropathy Examination (DNE) Score
- Diabetic foot ulcer assessment score

COMPLICATIONS/RED FLAGS[10]

Diabetes complications are divided into microvascular (due to damage to small blood vessels) and macrovascular (due to damage to larger blood vessels). The various complications are described in table 3.

Table 3: Complications of diabetes

Microvascular complications	
Diabetic retinopathy	Diabetic retinopathy is a leading cause of blindness and visual disability. It is caused by small blood vessel damage to the back layer of the eye, the retina, leading to progressive loss of vision, even blindness. Usually, the patient complains of blurred vision, although other visual symptoms may also be present
Nephropathy	Diabetic kidney disease is also caused by damage to small blood vessels in the kidneys. This can cause kidney failure, and eventually lead to death. In the developed countries, this is a leading cause of dialysis and kidney transplant. Patients usually have no symptoms early on, but as the disease progresses, they may feel tired, become anaemic, may not be able think clearly and even develop dangerous electrolyte imbalances
Neuropathy	It is the most common complication of diabetes. Diabetes causes nerve damage through different mechanisms, including direct damage by hyperglycemia and decreased blood flow to nerves by damaging small blood vessels. Sensorimotor neuropathy is characterized by symptoms such as burning, shooting, and tingling sensations, and allodynia (super-sensitivity or pain from normal stimuli). Impaired sensation in the feet is a strong risk factor for foot ulcer and other foot problems. Carpal tunnel syndrome is also common in diabetic subjects. Autonomic neuropathy can cause gastroparesis, sexual dysfunction, bladder incontinence, and cardiovascular damage Macrovascular complications.

10 World Health Organization [Internet]. Geneva, Switzerland: Diabetes Programme; 2006 [cited 2015 Apr 24]. Available from http://www.who.int/diabetes/action_online/basics/en/index3.html

Macrovascular complications	
Cardiovascular disease	People with diabetes are 2 to 4 times more likely to develop cardiovascular disease (CVD) than those without diabetes. The risk of coronary artery disease is increased in patients with poor glycaemic control. Hyperglycaemia damages blood vessels through a process called "atherosclerosis" or clogging of arteries. This narrowing of arteries can lead to decreased blood flow to the heart muscle (causing a heart attack), or to brain (leading to stroke), or to extremities (leading to pain and decreased healing of infections). The symptoms of these different conditions are varied: ranging from chest pain to leg pain, to confusion and paralysis
Cerebrovascular disease	Cerebrovascular disease is a term encompassing many disorders that affect the blood vessels of the central nervous system. These disorders result from either inadequate blood flow to the brain (i.e., cerebral ischemia) or from haemorrhages into the parenchyma or subarachnoid space of the central nervous system (CNS). Various terms have been used to describe cerebrovascular events, these include Transient Ischaemic Attack, Cerebral infarction, Cerebral haemorrhage. Sudden confusion, loss of coordination, unilateral weakness, and numbness are warning signs of a cerebrovascular event.
Peripheral arterial disease	Peripheral arterial disease (PAD) is an atherosclerotic occlusive disease. It is the major risk factor for lower extremity amputations. The abnormal metabolic state accompanying diabetes results in changes in the state of arterial structure and function predisposing people to PAD. The risk of development of PAD increases threefold to fourfold in patients with diabetes mellitus. The two cardinal symptoms of PAD are intermittent claudication and pain at rest.

PREVENTION

1) Exercise regularly (at least 30-60 min. daily) to maintain normal body weight.
2) Avoid
   - Excess sugar in any form: sweets, ice-creams, chocolate, candies.
   - Junk food e.g., aerated drinks, pizzas, burgers, and other kinds of frozen and fast foods.
   - Fried foods e.g., poori, parantha
   - High carbohydrate foods like potatoes, sweet potatoes etc.
   - Fruits with high sugar content e.g., grapes, mangoes, banana, chiku, custard apples, dates etc.
   - Tobacco use
   - Alcohol use
3) To cook food in minimum oil and try adopting a mixture of different cooking oils while preparing food.
4) Increase intake of seasonal green leafy vegetables and fibre-rich food.

MANAGEMENT

General management

Diabetes is a chronic metabolic disorder which demands careful medical management with lifestyle modifications. The treatment objectives should be:

- To relieve symptoms and improve quality of life
- To achieve and maintain appropriate glycaemic targets: Fasting blood glucose between 4 - 6 mmol/L (70-110 mg/dl); 2-hour post-meal blood glucose between 4 –7.8mmol/L (70-140 mg/dl); Glycated haemoglobin 6.5 % or less.
- To ensure weight reduction in overweight and obese individuals
- To prevent acute hyperglycemic complications i.e., ketoacidosis and the hyperosmolar state
- To prevent treatment-related hypoglycaemia
- To prevent chronic complications of diabetes by maintaining the glycaemic targets noted above
- Blood pressure less than 130/80 mmHg

The great diabetologist Joslin has mentioned that “the person who knows his /her diabetes will live longer.” He/ She should be oriented and motivated about the consumption of a healthy diet, the importance of regular physical activity, maintenance of complications of DM, and the relevance of timely investigations. Prevention is an integral part of the management of diabetes. Few important points pertaining to this include:

- **Diet**
  - ➢ Avoid refined sugars as in soft drinks or adding sugar to their beverages. Artificial sweeteners and 'diet' soft drinks, which do not contain glucose, may however be used.
  - ➢ Carbohydrates (60%), protein (15%) and fat (25%), mostly of plant origin and low in animal fat.

- ➢ A reduced total caloric content (portions) and an increase in the amount of fibre e.g., vegetables, fruits, and cereals.

- **Exercise**
  - ➢ Regular, simple exercise e.g., 30 minutes of brisk walking at least 3 days a week in ambulant patients. (All advice on exercise must be given considering the patient's age, presence of complications and other medical conditions.)

Homoeopathic management

Therapeutic intervention in the form of medicine at an early stage can be beneficial in relieving symptoms and halting the progress of the disease. Many research studies in the past on pre-diabetic states, established disease and even its complications[11-29] have shown favourable outcomes with

11 Shukla A, Mhaisker IU, Rampal KG, Sheshala R. In vivo study of homoeopathic preparation of Gymnema sylvestre mother tincture, 30C and 200C on streptozotocin-induced diabetic rats. Indian J Res Homoeopathy. 2021; 15: 95-102.

12 Patil AD, Patil CD, Patil DK et al. Evaluation of Antihyperglycemic Potential of Homeopathic Medicines Insulinum 6CH, Pancreatinum 6CH and Uranium nitricum 6CH in Streptozotocin-induced diabetic Rats. International Journal of High Dilution Research. 2020; 19(3):02-17

13 Pal A, Misra BB, Das SS, Gauri S S, Patra M, Dey S. Antidiabetic effect of Cephalandra indica Q in diabetic rats. Indian J Res Homoeopathy. 2013;7(2):81-90

14 Maiti S, Bera TK, Chatterjee K, Ghosh D.A study of the effect of mother tincture of Syzygium jambolanum on metabolic disorders of Streptozotocin induced diabetic male albino rat. Indian J Res Homoeopathy. 2014; 8:129-35

15 Sampath S, Narasimhan A, Chinta R, Nair KR, Khurana A, Nayak D, et al. Effect of homeopathic preparations of Syzygium jambolanum and Cephalandra indica on gastrocnemius muscle of high fat and high fructose-induced type-2 diabetic rats: Homeopathy. 2013 Jul;102(3):160-71

16 Rastogi DP, Saxena AC, Kumar S. Pancreatic beta-cell regeneration: a novel anti-diabetic action of Cephalandra indica mother tincture. British Homoeopathic journal 1988; 77(3): 147-151

17 Mehra P, Sharma B, Baig H, Raveendar Ch., Prasad R.V.R., Rao P. M, Raju K, et al. Efficacy of homoeopathic treatment for diabetic distal symmetric polyneuropathy. EXPLORE. 2021; 17(5) : 417-423.

18 Ponnam HB, Lamba CD, Oberai P, Masood SV, Yandamuri S, Rao M N, Manchanda RK. Calendula mother tincture vs normal saline for ulcer dressing as an add-on to Individualized Homoeopathic Intervention in the management of Diabetic Foot Ulcer: A Randomized Controlled Pilot Study. Indian J Res Homoeopathy. 2020; 14:233-41

19 Mourão L, Jr RC, Linares S M, Canabarro A, Fischer R C. Homeopathy and Periodontal Treatment in Type II Diabetic Patients: a 1-Year Randomized Clinical Trial. Braz. Dent. J. 2019. 30 (2)

20 Nayak C, Oberai P, Varanasi R, Baig H, Ch R, Reddy GR, Devi P, et al. A prospective multi-centric open clinical trial of homeopathy in diabetic distal symmetric polyneuropathy. Homeopathy. 2013; 102(2):130-8.

21 Li Li. The effect of Neuragen PN® on Neuropathic pain: A randomized, double-blind, placebo-controlled clinical trial. BMC Complementary and Alternative Medicine. 2010; 10:22.

22 Tiwari ML. Diabetes mellitus - defining scope and clinical approach for homoeopathic management. Indian Journal of Research in Homœopathy. 2008;2(3):28-36.

23 Aleena H, Siddique Suwaiba, humayoun Fatima. Efficacy of Homeopathic Mother tincture Amygdalus persica Folium on blood Sugar Level. International Journal of Homeopathy, Complementary and Alternative Medicine. 2020; 2(1).

24 Reddy E S R. Sharma Parveen, Singh Charanjeet. Efficacy of Homoeopathic Remedies in Management of Type 2 Diabetes Mellitus: A Clinical Study. World Journal of Pharmaceutical Research. 2020. 9; (4) : 1635-1649.

25 To KLA, Fok YYY, Chong KCM, Lee YCJ, Yiu LSS. Individualized homoeopathic treatment in addition to conventional treatment in type II diabetic patients in Hong Kong - a retrospective cohort study. Homeopathy. 2017;106(2):79-86.

26 Nayak C, Singh V, Singh K, Singh H, Gupta J, Ali Mohd. S, et al. A prospective observational study to ascertain the role of homœopathic therapy in the management of diabetic foot ulcer. American Journal of Homeopathic Medicine 2011; 104(4):166-76.

27 Baig H, Singh K, Sharma A, Kaushik S, Mishra A, and Chug S. Rhus aromaticus in management of Diabetes mellitus. Clinical Research Studies-Series II. New Delhi: CCRH; 2009:21-7.

28 Baig H, Singh K, Sharma A, Oberai P, Kaushik S, Nayak D, et al. Role of Cephalandra indica Q in the management of Diabetes mellitus as an add-on medicine along with conventional anti-diabetics. Indian Journal of Research in Homœopathy. 2008; 2(3):22-7.

29 Ghosh S, Chattopadhyay B, Koley M, Maiti S, Gourav K, Gupta S, Saha S. Plant Extracts as Add-On Therapeutics in Homeopathy: An Open-Label, Randomized Trial Using Mother Tinctures in Prediabetes. J Integr Complement Med. 2022 Sep;28(9):757-767.

homoeopathic treatment. There are many medicines available in the homoeopathic literature which can be selected based on presenting totality of each case for treatment of DM. Synthesis 9.0 (English) repertory has 55 medicines under the rubric "Generals - Diabetes Mellitus" and 113 medicines give under the rubric "Urine – Sugar." Homoeopathic medicines can be given as a standalone medicine along with lifestyle modification as soon as the disease is detected or as an adjuvant to conventional treatment when the disease has progressed. This kind of treatment can be helpful to relieve symptoms, improve quality of life and taper the dosage of conventional medicine as and when required.

Homoeopathic literature/armamentarium enlists many medicines to deal with this condition per se, however, the presenting totality of symptoms indicative of any medicine in the homoeopathic materia medica shall always be the sole guide for every individual case.

A "constitutional" remedy, based on the totality of the patient's symptoms and characteristics will help to improve the general sense of well-being, and as well as to improve diabetes control, and maybe to lower the insulin or drug requirements.

A holistic approach is required to be prescribed covering the entire symptomology of the patient. Polychrests in homoeopathic system of medicine are often found to be constitutional remedies and are found indicated.

Constitutional remedies like *Arsenicum album, Arsenicum bromatum, Calcarea carbonicum,* Phosphorus, *Natrum muriaticum, Lycopodium, Silicea, Kali bromatum, Sulphur* etc. are found to correspond to this condition. Few commonly indicated medicines include the acid group of medicines *(Lactic acid, Phosphoric acid, Sulphuric acid, Oxalic acid, Picric acid, and Uranium nitricum)* which are known to possess therapeutic value to arrest or stop the progress of diabetes.

However, remedies like nosodes *(Bacillinum, Medorrihnum, Lyssin etc.)*, sarcodes *(Adrenalin, Insulinum, Lac vaccinum defloratum, Lac vaccinum, Lac defloratum, Thyroidinum etc.)*, *bowel nosodes (B. gaertner, B.morgan, Proteus etc.)* and other remedies with their specific indications which, when found well indicated in a case possess no less power to cure the patient as our more commonly prescribed polychrests. Some organ remedies and Indian medicines like *Abroma augusta* (Diabetes mellitus, fishy odor in urine), *Cephalendra indica* (Diabetes with polyneuropathy), *Syzygium jambolanum* (Diabetes with pruritis), *Gymnema sylvestre* (Diabetic carbuncles, burning all over the body) etc. may also be given especially in some long-standing cases who present with very few constitutional symptoms or in whom pathological changes or complications are quite apparent and susceptibility to react to constitutional medicines is low or may produce a severe disease aggravation.

In such cases, once the acute pathological insult has been controlled with the organ remedy or if the symptoms became clearer, it may be possible to later follow up with indicated constitutional medicine.

For the treatment of adverse effects/complications of diabetes/ diabetes with some associated diseases, there is a further list of medicines in the repertory which is indicated through their peculiar symptomatology. A few examples of other rare remedies with their indications are:

Diabetes mellitus with gouty symptoms: ***Lactic acid, Natrium sulphuricum.;*** Diabetes with debility- ***Acetic Acid, Opium;*** Diabetes with gangrene, boils, carbuncles, diarrhoea - ***Arsenicum album;*** Diabetes with impotency - ***Coca, Moschus;*** Diabetes with melancholia, emaciation, thirst, restlessness and albuminuria - ***Helonias dioica;*** Diabetes with motor paralysis - ***Curare;*** Diabetes with the rapid course - ***Curare., Morphinum.;*** Diabetes with ulceration - ***Syzygium jambolanum;*** Great emaciation, debility, and a tendency to ascites with general dropsy - ***Uranium nitricum.***

Apart from the above medicines, given below the indications of commonly prescribed constitutional medicines excerpted from research and experience [30-33] :

Medicines	General indications	Characteristic particulars
Arsenicum album	*Chilly patient; rapid disproportionate prostration; burning pains better by heat (except headache); cadaveric odour of discharges and body; anxiety, anguish, fear for death and restlessness*	• Rapid weakness and emaciation • Polyuria with bulimia. Great thirst, drinks much but little at a time • Burning all over the body due to acute or chronic pathology of nerves and blood vessels which becomes better from warm application • Paleness of skin; disposition to gangrene and skin affections
Natrum muriaticum	*Hot patient: poorly nourished; great emaciation (marked on neck), losing flesh while eating well; craving for salt; aversion to bread and fatty things; constipated; increased thirst; mapped tongue with red insular patches; melancholic, sad, plays alone, irritable, cross, cries when spoken to, awkward, hasty, drops things from nervous weakness; disposition to weep without cause, consolation aggravates*	• Polyuria, unquenchable thirst; emaciation especially marked about the neck though eating well; loss of appetite and scanty sweat • Dryness of all mucous membrane and skin • Involuntary escape of urine while walking, coughing, or sneezing

30 Boericke W. New Manual of Homoeopathic Materia Medica with Repertory. New Delhi : B. Jain Publisher's (P) Ltd.

31 Vermeulen F. Concordent materia medica. New Delhi : Indian books & Periodical Publishers.

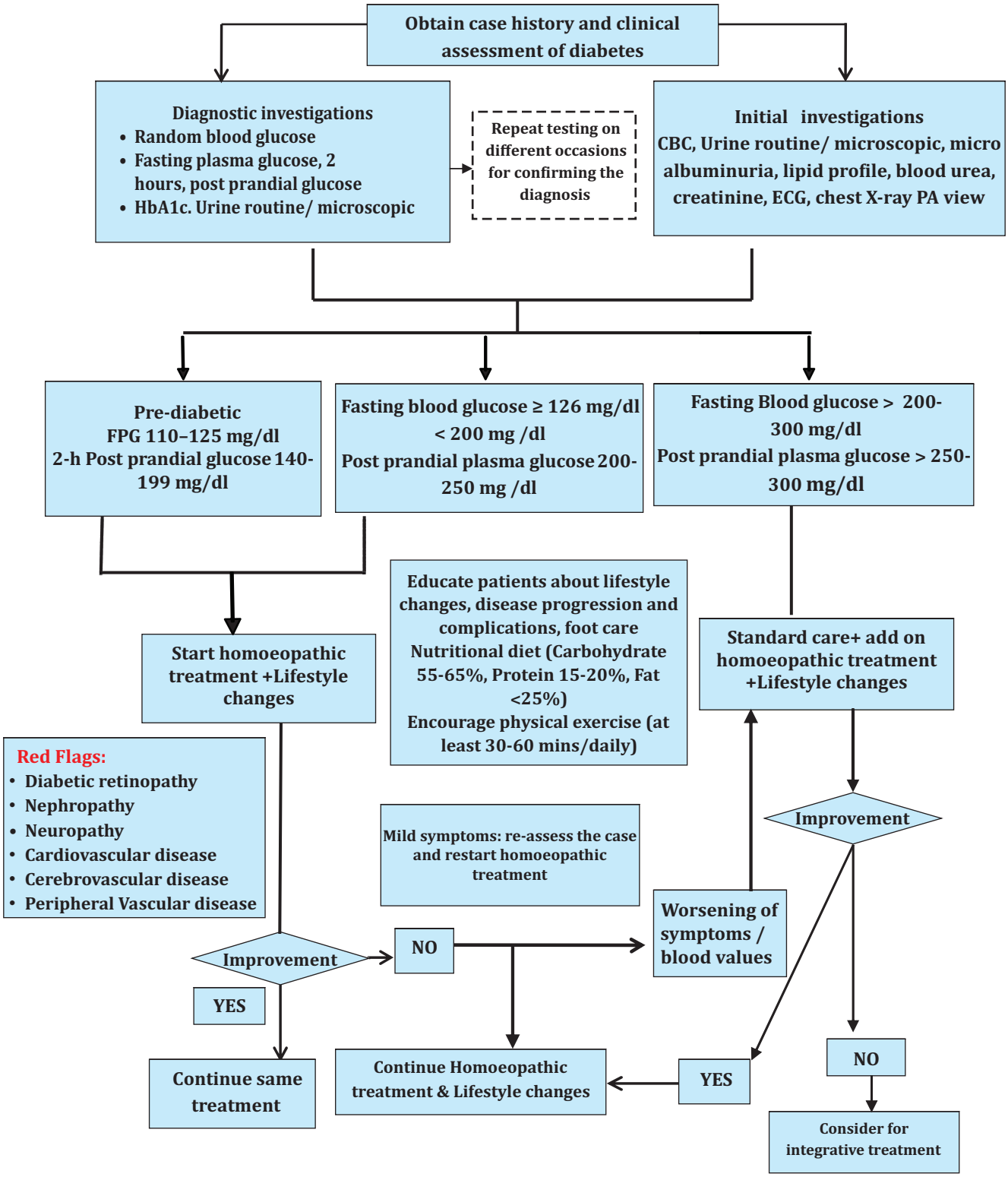
32 Allen H.C. Keynotes and characteristics with Comparisons of some of the leading remedies of the Materia medica with Bowel nosodes. Eighth edition. New Delhi : B. Jain Publisher's (P) Ltd.

33 Lilienthal S. Homoeopathic Therapeutics. New Delhi : B Jain Publishers (P) Ltd.

Medicines	General indications	Characteristic particulars
Lycopodium clavatum	*Intellectually keen but physically weak; upper part of body emaciated, lower part semi dropsical; complexion pale, dirty, sallow with deep furrows; looks prematurely old; recurrent respiratory and gastro-intestinal affections; worse from 4 to 8 pm; right sided complaints or symptoms shift from right to left; desires warm foods and drinks, sweets; tendency for flatulent dyspepsia; dominating, cranky, lack of self-confidence, precocious*	• Constant hunger and thirst worse at night • Numbness, drawing and tearing in limbs especially at night Polyuria at night. Urine milky, turbid. Burning in general and urine in particular • No erectile power, impotence, diminished sexual power and desire (impotency) • Great emaciation; mental and bodily exhaustion; tendency for lithic acid gravel and tardy wound healing
Phosphorous	*Tall, fast growing child with tendency to stoop; haemorrhagic tendency; Chilly patient; Craving for salt, cold foods and drinks; Oversensitive to external impressions; nervous and affectionate, anxious esp. during a thunderstorm*	• Glycosuria; urine pale, watery or turbid, whitish like curdled milk • Albuminuria with brick dust sediment etc • Ravenous appetite (Hungry soon after eating) • sudden emaciation and gradual weakness and prostration; trembling, numbness and paralysis of lower limbs • Increased perspiration and thirst for cold water
Calcarea carbonica	*Chilly patient; takes cold easily; Fat, fair, flabby with a large head, distended abdomen with a red face; pale, weak, easily tired, slow development of milestones; the tendency for lymphatic glandular enlargement; Head sweats profusely while sleeping; Sour smelling discharges; longing for fresh air; Desire for eggs and indigestible things; Aversion to meat & milk; Fearful, timid, shy, slow and sluggish*	• Frequent and copious urination; sour or pungent; trickling of urine after micturition • Tendency for unhealthy and flaccid wounds which do not heal easily • Recurrent infections with a suppurative tendency

Medicines	General indications	Characteristic particulars
Mercurius	*Sensitive to changes of temperature; Profuse offensive perspiration; Tongue flabby with an imprint of teeth; Increased salivation; Increased thirst for large quantity of water Worse at night, in wet damp weather*	• Excessive hunger, emaciation and profuse perspiration which does not relieve and may even increase the suffering • Profuse urination where the quantity of urine voided is larger than amount of water drunk, frequent urging to urinate. Urine albuminous • Intense thirst, although the tongue looks moist, and the saliva is profuse • Great weakness and trembling from least exertion • Itching and burning in the vulvae
Sulphur	*Dirty, filthy, lean, thin, stoop shouldered children who walk and sit stooping; Hot patient; Red lips, warm and moist palms; Desires sweet; Nervous, quick tempered*	• Excessive hunger, thin and weak, even with good appetite • Weak, empty, gone, or faint feeling in the stomach about 11 a. m. cannot wait for lunch • Frequent weak, faint spells during the day • Profuse thirst, drinks much, eats less • Frequency of urination must hurry to urinate large quantity of colorless urine • Burning all over the body. Dry, filthy, dirty suppurating skin; with profuse acrid discharges excoriating the parts

ALGORITHM OF TREATMENT PROCESS FOR DIABETES MELLITUS


Obtain case history and clinical assessment of diabetes
Diagnostic investigations
• Random blood glucose
• Fasting plasma glucose, 2 hours, post prandial glucose
• HbA1c. Urine routine/ microscopic
Repeat testing on different occasions for confirming the diagnosis
Initial investigations
CBC, Urine routine/ microscopic, micro albuminuria, lipid profile, blood urea, creatinine, ECG, chest X-ray PA view
Pre-diabetic
FPG 110–125 mg/dl
2-h Post prandial glucose 140-199 mg/dl
Fasting blood glucose ≥ 126 mg/dl < 200 mg /dl
Post prandial plasma glucose 200-250 mg /dl
Fasting Blood glucose > 200-300 mg/dl
Post prandial plasma glucose > 250-300 mg/dl
Start homoeopathic treatment +Lifestyle changes
Educate patients about lifestyle changes, disease progression and complications, foot care
Nutritional diet (Carbohydrate 55-65%, Protein 15-20%, Fat <25%)
Encourage physical exercise (at least 30-60 mins/daily)
Standard care+ add on homoeopathic treatment +Lifestyle changes
Red Flags:
• Diabetic retinopathy
• Nephropathy
• Neuropathy
• Cardiovascular disease
• Cerebrovascular disease
• Peripheral Vascular disease
Mild symptoms: re-assess the case and restart homoeopathic treatment
Improvement
Improvement
NO
Worsening of symptoms / blood values
YES
Continue same treatment
Continue Homoeopathic treatment & Lifestyle changes
YES
NO
Consider for integrative treatment

Chapter 9

DIARRHOEA

DIARRHOEA

CASE DEFINITION[1,2]

Diarrhoea is defined as the passage of three or more loose or abnormally liquid stools per day (within 24 hr.) for upto two weeks. The attack usually lasts for about 3 to 7 days but it may last for 10-14 days. It is often accompanied by vomiting.

INCIDENCE/PREVALENCE[2]

Because of poor sanitation and more limited access to health care, it remains one of the most common causes of mortality due to fluid loss thereby leading to dehydration particularly among children in developing countries.

- Worldwide, nearly 1.7 billion cases of diarrhoeal disease emerge every year.
- Diarrhoeal disease is the second biggest killer of children under five years old & responsible for about one in five deaths next to malnutrition. Each year diarrhoea kills around 525000 children under five.
- In India, at least 1.5 million children under the age of 5 yrs. die every year due to acute diarrhea.[2] It accounts for 20% of all pediatric deaths.[3]

AETIOLOGY

Diarrhoea is usually caused by the infection of intestinal tract which may be bacterial, viral or parasitic.[4,5]

- **Viral agents -** Rotavirus (15-25%), Norovirus, Cytomegalovirus, Herpes simplex virus, and Viral hepatitis
- **Bacterial agents -** E. Coli (10-20%), Campylobacter (10-15%), Shigella species (5-15%), Vibrio cholera (5-10%), Salmonella (1-5%)
- **Parasitic agents -** Giardia intestinalis, Cryptosporidium parvum (5-15%), Entamoeba histolytica
- **Other causes -** Malaria, Urinary infection, Meningitis, Respiratory infection, ENT infection, Simple teething in children

---

1 Dinesen L, Harbord M. Acute diarrhea. Medicine. 2013; 41(2): 104–7.

2 World Health Organization. Diarrheal disease. Geneva, Switzerland: World Health Organization; 2015 [cited 2015 Mar 19]. Available from: https://www.who.int/news-room/fact-sheets/detail/diarrhoeal-disease

3 Pathak D, Pathak A, Marrone G, Diwan V, Lundborg CS. Adherence to treatment guidelines for acute diarrhoea in children up to 12 years in Ujjain, India - a cross-sectional prescription analysis. BMC Infectious Diseases. 2011; 11:32.

4 Park K. Park's textbook of Preventive and social medicine, 19 thedition. Jabalpur: Banarsidas Bhanot Publisher; 2007:183-4.

5 World Gastroenterology Organization. Practice guideline: Acute diarrhea. 2012. [cited 2015 mar 19] Available from: https://www.worldgastroenterology.org/UserFiles/file/guidelines/acute-diarrhea-english-2012.pdf

ROUTE OF INFECTION

Infectious diarrhea is usually acquired by oro-fecal route, especially through contaminated food or drinking-water.

RISK FACTORS[1,6]

- Malnourished children
- People having impaired immunity or suffering from HIV infection
- Prolonged intake of antibiotics
- Children born to undernourished mothers
- Zinc deficiency which suppresses immune function
- Incorrect feeding practices in babies
- Lack of personal hygiene

CLASSIFICATION[7]

Episodes of diarrhoea can be classified into 3 categories:

- **Acute diarrhoea** – Presence of 3 or more loose watery stool in the preceding 24 hours
- **Dysentery** – Presence of visible blood in the stool
- **Persistent diarrhoea** - Acutely starting episodic diarrhoea lasting more than 14 days

DIAGNOSIS[6]

Clinical Presentation

- Frequent passing of abnormal watery stool
- Abdominal pain/ cramp
- Nausea
- Vomiting
- Fever
- Dehydration
- Weight loss
- Loss of appetite

6 Borooah Vani K. On the incidence of diarrhea among young Indian children. Economics and Human Biology (2). 2004;119-38.

7 World Gastroenterology Organisation. Global Guidelines; Acute diarrhea in adults and children: a global perspective. 2012 [cited 24.Dec. 2016]. Available from: http://www.worldgastroenterology.org/guidelines/global-guidelines/acute-diarrhea/acute-diarrhea-english

Additional symptoms may include:

Tachycardia, hypotension, abdominal tenderness, cold, sneezing, cough, irritability and lethargy

Diarrhoea presentation in different infections:

- Diarrhoea present WITH vomiting, low grade fever with no mucus in stools: indicates viral infection
- Diarrhoea present WITH vomiting, abdominal cramps, blood and mucus in stools WITH fever: indicates bacterial infection
- Diarrhoea present WITH blood and mucus in stool WITH no fever: indicates amoebiasis
- Profuse diarrhoea (rice water stools) WITH vomiting: indicates cholera
- Diarrhoea present WITH excessive vomiting (especially if in more than one member of the household or group): indicates food poisoning

Signs of dehydration[4]

- Pulse rate > 90/min
- Postural hypotension
- Supine hypotension and absence of palpable pulse
- Dry tongue
- Sunken eyeballs
- Skin turgor
- Sunken fontanelle (in infants)
- Breathing abnormally rapid

Clinical evaluation of diarrhoeal cases[6,7,8]

Clinical evaluation is done on the basis of patient history, physical examination & level of dehydration during diarrhoea.

History

1. History of travel (suggest source of diarrhea)
2. Attack of crying with pallor
3. Onset, frequency & quantity of stool
4. Character of stool (bile, bloody, mucous etc.)
5. Past medical history
6. Abdominal pain, nausea, vomiting & fever (suggests effect of toxins: organophosphate insecticides, arsenic or small intestinal pathogens)
7. Epidemiological clue

8 Baldi F, Bianco MA, Nardone G, Pilotto A, and Zamparo E. Focus on acute diarrhoeal disease. World J Gastroenterol. 2009; 15(27): 3341-48.

8. Consumption of certain food items
9. Any systemic manifestation like arthritis, reiter's syndrome
10. Any anxiety/acute emotional stress
11. Over consumption of alcohol

Physical examination

1. General status
2. Temperature
3. Body weight
4. Blood pressure
5. Respiratory rate/Pulse rate/Heart rate

Levels of Dehydration [4,9]

Finding	Mild (A)	Moderate (B)	Severe (C)
Patient's appearance	Thirsty, alert, restless	Restless, irritable	Drowsy, limp, old, sweaty, may be comatose
Pulse	Full, normal rate	Rapid	Rapid, feeble and sometimes impalpable
Blood pressure	Normal	Normal to low	Very low less than 80 mmHg, may be un-recordable
Skin elasticity	Pinch, retracts immediately	Pinch, retracts slowly	Pinch, retracts very slowly (more than 2 seconds)
Tongue	Moist	Moist to dry	Very dry
Respiration	Normal	Deep, rate may be increased	Deep, rapid rate
Oral tissues	Tacky or slightly dry	Dry	Parched
Infant fontanelle (soft spot in skull)	Normal	Sunken	Markedly sunken
Eyes	Normal	Sunken	Markedly sunken
Urine output	Normal	Markedly reduced	Little or none
Fluid deficit	40-50 ml per kg	50-100ml per kg	More than 100 ml per kg
Treatment	Treatment with home fluids and ORS solution	Rehydrate with ORS solution	I.V. rehydration therapy

ORS: Oral Rehydration Salt

9 Govt of India Standard Treatment Guidelines. Cholera. AFMC, Pune, In collaboration with MOHFW, Govt of India & WHO Country Office, India. 2007.

INVESTIGATIONS[8]

- Complete blood count
- Stool routine examination
- Stool for culture and sensitivity
- Blood urea and creatinine
- Sigmoidoscopy

DIFFERENTIAL DIAGNOSIS[8]

- Food poisoning
- Bile salt malabsorption
- Volvulus and intussusception
- Irritable bowel syndrome
- Exocrine pancreatic insufficiency
- Lactose intolerance
- Appendicitis
- Adenocarcinoma, neuro- endocrine tumour

RED FLAGS[7,8]

- Evidence of severe dehydration & malnutrition
- Severe abdominal pain & excessive bloody diarrhea (More than 5 bloody motions/day)
- Severe weight loss (>10% body weight in previous 2 wk.)
- Fever >38.5°C
- Persistent vomiting
- Suboptimal response to ORT (Oral rehydration therapy)
- No urine in previous 12 hours

EVALUATION AND ASSESMENT[10]

Diarrhoea index score (Developed by Central Council for Research in Homoeopathy)

Symptom/signs	Score				
	0	1	2	3	4
No. of Stools / day	Normal	4	6	8	12
Diarrhoea (consistency)	Normal	Loose	Watery	Slimy	Mucus
Fever	Absent		Low grade		High grade
Vomiting/ day	Absent	Only once	2 – 3	3 – 5	
Gross/Occult blood in stool	Absent		Fresh	blood	Black
Weakness	Absent	Mild	More		Profound, has to rest
Muscular cramps	Absent	Mild	Moderate	Severe	
Weight loss	None			< 5%	Mild (5-6%)

PREVENTION[2,6,8,10]

- Access to safe drinking water
- Use improved sanitation
- Wash hand with soap
- Food preparation & preservation should be clean
- Child exclusively on breastfeed for initial six months of life
- Maintain personal hygiene
- Educate the people about its cause, infection, spread, nutrition & prevention
- Vaccinate the child with rotavirus vaccination, salmonella typhi vaccination
- Measles immunization can significantly lessen the incidence and severity of diarrheal diseases
- Breeding of flies should be controlled
- Improving nutrition of mother and child
- Prevention of diarrhoeal epidemics

MANAGEMENT

General management

The main objectives of acute diarrhoeal management are:[11,12,13]

10 Nayak C, Singh V, Singh K, Singh H, Sharma K, Oberai P, et al. A prospective multicentric observational study to evolve the usefulness of the predefined homoeopathic medicines in the management of acute diarrheal disease in children. Indian Journal of Research in Homoeopathy. 2009; 3(3): 21-28.

11 World Health Organization. The Treatment of Diarrhoea: A manual for physicians and other senior health workers; Geneva, Switzerland: 2014. (cited 2015 Jan) Available from: http://whqlibdoc.who.int/publications/2005/9241593180.pdf

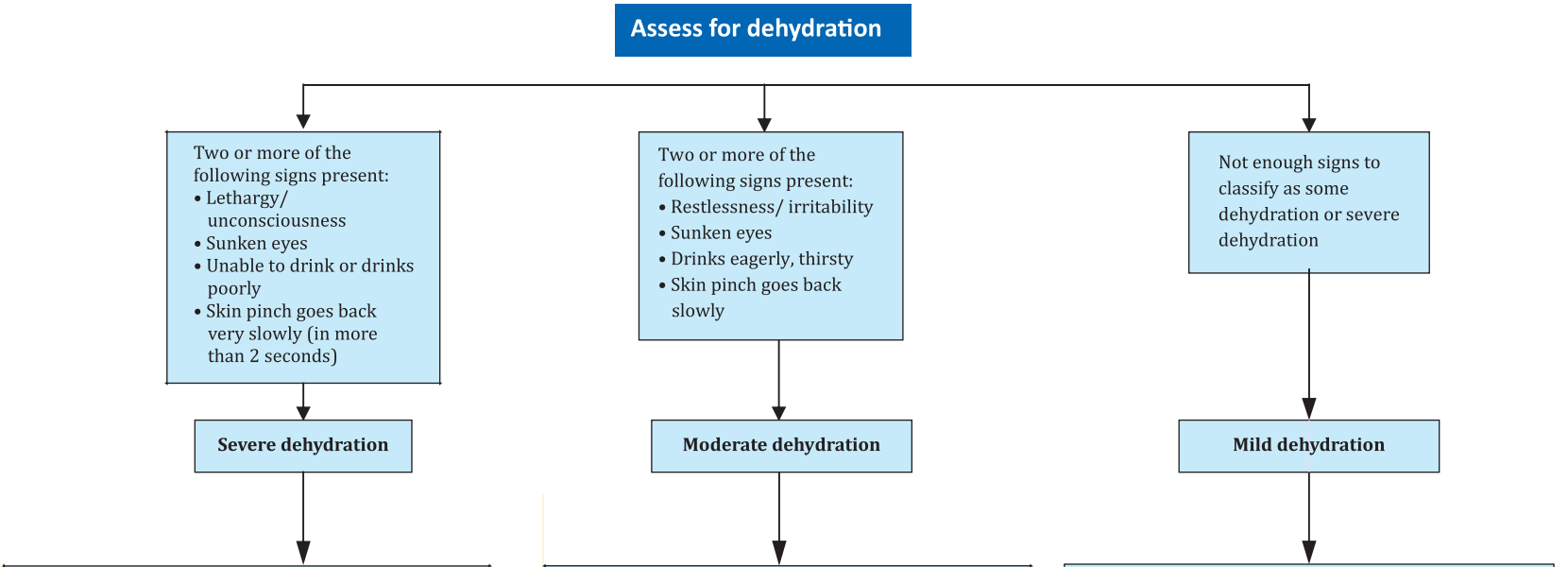
12 Central council for research in homoeopathy. Homoeopathy for mother and child care (paediatric). Training manual volume-2, Central council for research in homeopathy in collaboration with country office WHO, India.

13 World Health Organization. Oral Rehydration Salts: Production of the new ORS, Geneva, Switzerland. 2006. Available from: https://apps.who.int/iris/bitstream/handle/10665/69227/WHO_FCH_CAH_06.1.pdf?sequence=1&isAllowed=y

- *To prevent dehydration:* this is very important since so much of the child's body fluid is being lost through the stools and vomiting
- *To replace lost fluid:* as much fluid as goes into the stools should be given to the child to drink for replacement
- *To maintain nutrition:* mothers tend not to give a child who has diarrhoea anything or very little to eat, at a time when he needs all the food he can get. Continue to feed as much as can be tolerated
- *Reduce severity* of disease
- *To maintain personal hygiene:* or else the patient end up taking the germs from the stools back into the mouth, continuing the diarrhoea they are trying to stop

Assessment and management of diarrhoea[11]:

The assessment and management of diarrhea also depends on the intensity of dehydration. After assessment of dehydration as per the flow diagram given. The management is approached further.


Assess for dehydration
Two or more of the following signs present:
• Lethargy/ unconsciousness
• Sunken eyes
• Unable to drink or drinks poorly
• Skin pinch goes back very slowly (in more than 2 seconds)
Severe dehydration
Two or more of the following signs present:
• Restlessness/ irritability
• Sunken eyes
• Drinks eagerly, thirsty
• Skin pinch goes back slowly
Moderate dehydration
Not enough signs to classify as some dehydration or severe dehydration
Mild dehydration

Diarrhea treatment Plan C - Severe dehydration

1. A child with severe dehydration requires treatment with Intravenous (IV) fluids in hospital.
2. Start IV fluids immediately. If the child can drink, give ORS by mouth while the drip is set up. Give 100 ml/kg Ringer's lactate solution (If not available, normal saline) as follows: for infants under 2 months, 30ml/ per kg in 1st one hour and 70 ml/kg in next 5 hours. For children above 12 months and below 5 years, 30ml/kg in first 30 min. and 70 ml/kg in next 5 hours.
3. Reassess the child every 1- 2 hours.
4. If there is repeated vomiting or increasing abdominal distension, give fluid slowly.
5. If hydration status is not improving, give the IV drip more rapidly
6. Also give ORS as soon as child can drink; usually after 3-4 hrs. (infants) or 1-2 hrs. (children).
7. Reassess an infant after 6 hours and a child after 3 hours. Classify dehydration. Then choose the appropriate plan (A, B, or C) to continue treatment.

NOTE: If possible, observe the child for at least 6 hours after rehydration to be sure the mother can maintain hydration giving the child ORS solution by mouth.

Diarrhea treatment Plan B mild to moderate dehydration

<u>In first 4 hrs</u>.

1. Child to be treated with ORS in the health facility.
2. Determine the amount of ORS to be given during first 4 hrs. with respect to the weight of the child.
3. If child vomits, wait 10 minutes and start again.
4. Continue breast feeding.
5. No other food except breast milk and ORS should be given.

<u>After 4 hrs.</u>

6. Continue with other fluids the child will accept
7. Reassess the child & classify the child for dehydration
   a. If no dehydration seen- switch to plan A & send child home
   b. If mild to moderate dehydration continue plan B and give food for every 3-4 hrs.
   c. If severe dehydration seen- follow plan C

Diarrhea treatment Plan A - mild or no dehydration

1. Child can be treated safely at home.
2. Instruct mother on how to prevent diarrhoea.
3. Breastfeeding should continue, frequently and for longer duration at each feed along with ORS.
4. If child vomits, wait 10 minutes and start again.
5. In children, not exclusively on breast feed, give ORS , food-based feeds, fluids (such as soup, rice water, and yoghurt drinks), and clean water
6. Instruct mother to give home-based fluids like rice water, soup, water, and orally child should continue to feed.
7. Continue giving extra fluid until diarrhea stops.
8. Ask the mother to return to the health facility if the child gets worse, passes more watery stools, vomits repeatedly, becomes very thirsty, eats or drinks poorly or is not better in 2 days.

Homoeopathic management

Acute diarrhea can be effectively managed with homoeopathic medicines along with general management detailed above. The main aim of treatment is to provide symptomatic improvement, minimize complications and promote early recovery. Regular evaluation and assessment of the person directs further treatment, response of remedy, need for referral (if any) and course of action.

Observational studies,[10-14] randomized controlled trials[15,16,17] and meta-analysis[18] of evaluation of individualized homoeopathic treatment in acute diarrhea warrants homoeopathic treatment for acute diarrhea. There are a number of medicines in homoeopathic literature[19,20,21] for the treatment / management of acute diarrheal condition. Around 584 homeopathic medicines are given in Synthesis repertory[22] under the rubric 'diarrhea'. Some of the commonly prescribed specific medicines are. ***Argentum nitricum:*** Diarrhoea immediately after eating or drinking. ***Camphor:*** Asiatic cholera with cramps in the calves, coldness of the body, collapse. ***Croton tiglium:*** Copious watery stools with much urging; always shoots out forcibly, with gurgling in the intestines; worse drinking the least quantity, or even while eating. ***Dulcamara:*** Diarrhoea in damp cold weather. ***Gambogia:*** Diarrhoea with sudden and forcible ejection of bilious stools. ***Ipecacuanha:*** Diarrhoea with persistent nausea & vomiting. ***Natrum sulph:*** Diarrhea in damp weather. ***Rheum:*** Use in children with sour diarrhoea during dentition. ***Zingiber:*** Diarrhoea from drinking contaminated water, with much flatulence, cutting pain and relaxation of the sphincter.

Indications of few commonly prescribed medicines for diarrhea are given below:[19,20,21]

Medicines	General indications	Characteristic particulars
Aloe socotrina	*Desire for juicy things, fruits, aversion to meat; dissatisfied, angry about himself while constipated*	• Summer diarrhoea • Diarrhoea after eating and drinking, driving out of bed in early morning, involuntary with want of confidence in sphincter ani

14 Fisher P. Homoeopathic treatment of acute childhood diarrhoea in a developing country. Br Homeopath J 1995; 84(01): 46-47.

15 Jacobs J, Jiminez LM, Gloyd S, Carares F E, Gaitan MP, Crothers D. Homœopathic treatment of acute childhood diarrhoea: A randomized clinical trial in Nicaragua. British Homoeopathic journal. 1993; 82(2): 83-6.

16 Jacobs J, Jiménez LM, Malthouse S, Chapman E, Crothers D, Masuk M, et. al. Homeopathic treatment of acute childhood diarrhea: results from a clinical trial in Nepal. J Altern Complement Med. 2000;6(2):131-9.

17 Jacobs J, Jiménez LM, Gloyd SS, Gale JL, Crothers D. Treatment of acute childhood diarrhea with homeopathic medicine: a randomized clinical trial in Nicaragua. Pediatrics. 1994;93(5):719-25.

18 Jacobs J, Jonas WB, Jiménez-Pérez M, Crothers D. Homeopathy for childhood diarrhea: combined results and meta-analysis from three randomized, controlled clinical trials. Pediatr Infect Dis J. 2003;22(3):229-34.

19 Boericke W. Boericke's New Manual of Homoeopathic Materia Medica with Repertory: Third Revised & Augmented Edition based on Ninth Edition. New Delhi: B. Jain Publishers; 2007.

20 Clarke J H. A Dictionary of Practical Materia Medica, vol- 3. New Delhi: B. Jain Publishers (P) ltd.;2006.

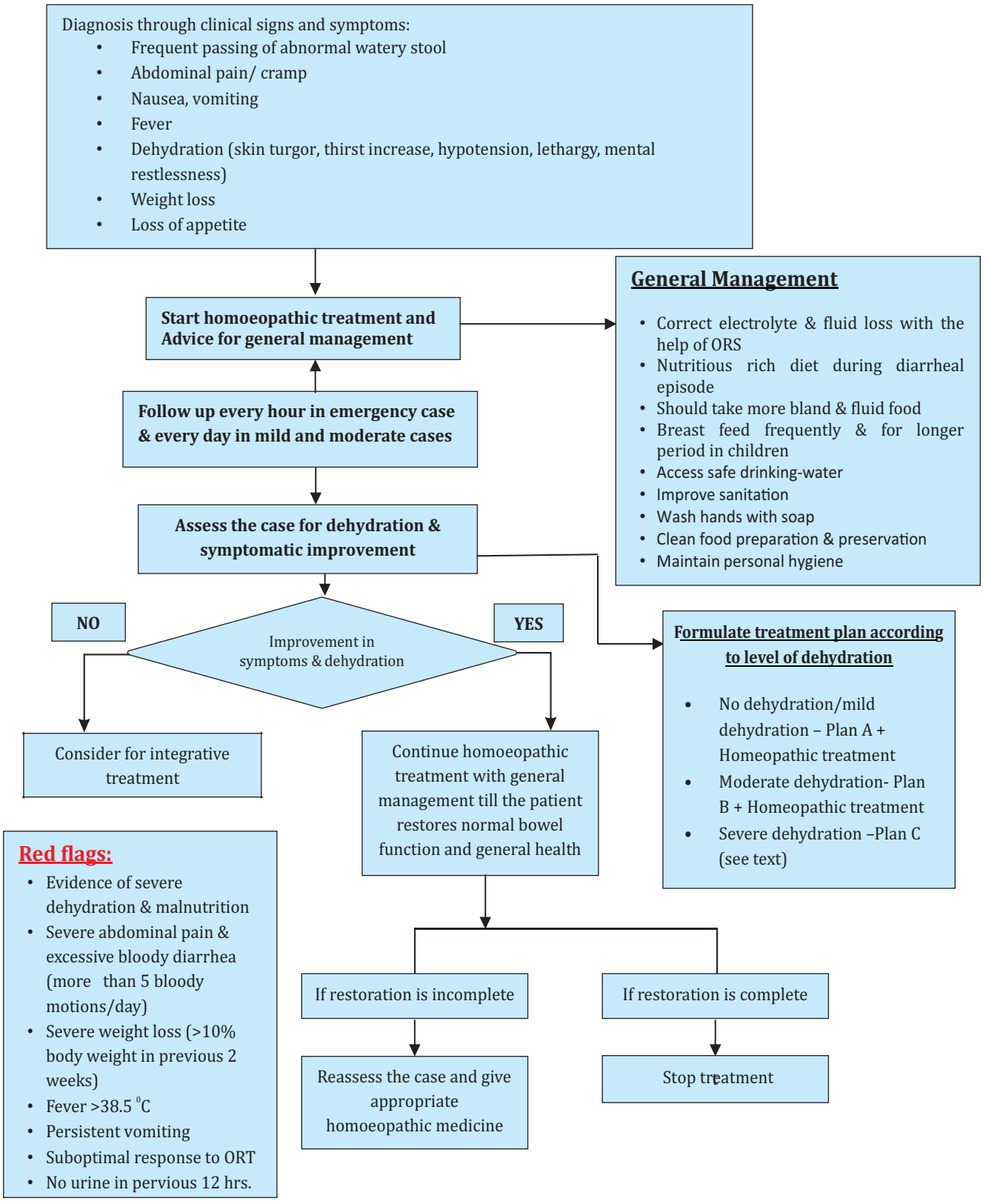
21 Allen HC. Keynotes and Characteristics With Comparisons of some of the Leading Remedies of the Materia Medica. New Delhi: B. Jain Publishers (P) ltd.;2007.

22 Schroyens F. Synthesis Repertory ver. 9.1; New Delhi, B Jain Publishers (Pvt. Ltd.); 2002.

Medicines	General indications	Characteristic particulars
		• Cutting and griping pain in right lower abdomen, before and during stool, pain ceases after stool leaving • Profuse sweating and extreme weakness • Jelly like stool with burning pain in rectum and anus • Hungry during diarrhoea • Stool passes with flatus • Stool: yellow thin, watery, offensive, excoriating
Arsenicum album	*Chilly patient; pale, weak, rapid disproportionate prostration; cadaveric odor of discharges and body; increased thirst; drinks often, but a little at a time; craves milk; anxiety, anguish, fear of death, restlessness, fretful, wants to be carried rapidly*	• Ailments from stale food, melons, ice creams, unripe fruit, spoiled cheese and watery fruits • Diarrhoea after eating or drinking, from chilling stomach, worse at night • Cannot bear smell or sight of food • Stool small, offensive, dark, rice water like, followed by great prostration
Chamomilla	*Chilly patient; complaints during dentition; tongue covered with thick, yellowish coating; nervous, excitable; uncivil; peevish, irritable and oversensitive to pain, quiet only when carried; wants many things and become angry when refused or rejects when offered. Mental calmness contraindicates Chamomilla*	• Diarrhoea from cold, anger or chagrin; during dentition; from downward motion • Stool green, watery, corroding; hot, very offensive, like rotten eggs • Chopped white and yellow mucus like chopped eggs and spinach
Podophyllum	*Prone to get intestinal derangement; thirst for large quantities of cold water; sensation of weakness or sinking; craving for acids; restless, cannot sit still*	• Ailments from hot weather, acid fruits • Stool- profuse, painless, polychromatic, putrid with prolapse of rectum • Gastro-enteritis with colicky pain and bilious vomiting • Rumbling and shifting of flatus in ascending colon

Medicines	General indications	Characteristic particulars
		• Diarrhoea of long standing; early in morning; during teething in children, with hot, glowing cheeks • Stools watery in the morning continues through forenoon, followed by normal stool in the evening • Constantly rubs the region of the liver with his hand
Cinchona officinalis	*Chilly patient; sensitive to draughts of air yet wants to befanned; face pale, eyes sunken and surrounded by blue margins; intermittent fevers; worse damp weather; extreme debility; periodicity; profuse, exhausting discharges (diarrhoea, sweat); haemorrhages from orifices; desire for sour and sweet things; intolerance to fruits; apathetic, indifferent, taciturn, oversensitive to noise, touch and jar; aversion to mental and bodily exertion*	• Ailments from fruits, milk and hot weather • Painless, exhausting diarrhoea • Gurgling and rumbling in abdomen with bloated abdomen • Stool with undigested food particles, dark, watery, frothy, yellow • Diarrhoea worse at night, after meal
Veratrum album	*Chilly patient; coldness, weakness and cyanosis is the trio of the remedy; thin, anaemic; great prostration with vertigo, pale face and clean tongue; collapse; cold perspiration on forehead; voracious appetite; craves fruits, juicy and cold things, ice and salt; aversion to warm food; frenzy, shrieks, curses, desire to cut and tear things, howling all night*	• Diarrhoea very painful, watery, copious, and forcibly evacuated, followed by great prostration • Diarrhea from least movement, after fright • Diarrhoea with great vomiting and purging • Stools frequent, greenish, watery, gushing, mixed with flakes, cutting colic with cramps commencing in hands and feet and spreading all over • Cold sweat on forehead during diarrhea

ALGORITHM OF TREATMENT PROCESS FOR DIARRHOEA


Diagnosis through clinical signs and symptoms:
• Frequent passing of abnormal watery stool
• Abdominal pain/ cramp
• Nausea, vomiting
• Fever
• Dehydration (skin turgor, thirst increase, hypotension, lethargy, mental restlessness)
• Weight loss
• Loss of appetite
Start homoeopathic treatment and Advice for general management
General Management
• Correct electrolyte & fluid loss with the help of ORS
• Nutritious rich diet during diarrheal episode
• Should take more bland & fluid food
• Breast feed frequently & for longer period in children
• Access safe drinking-water
• Improve sanitation
• Wash hands with soap
• Clean food preparation & preservation
• Maintain personal hygiene
Follow up every hour in emergency case & every day in mild and moderate cases
Assess the case for dehydration & symptomatic improvement
NO
Improvement in symptoms & dehydration
YES
Formulate treatment plan according to level of dehydration
• No dehydration/mild dehydration – Plan A + Homeopathic treatment
• Moderate dehydration- Plan B + Homeopathic treatment
• Severe dehydration –Plan C (see text)
Consider for integrative treatment
Continue homoeopathic treatment with general management till the patient restores normal bowel function and general health
Red flags:
• Evidence of severe dehydration & malnutrition
• Severe abdominal pain & excessive bloody diarrhea (more than 5 bloody motions/day)
• Severe weight loss (>10% body weight in previous 2 weeks)
• Fever >38.5 °C
• Persistent vomiting
• Suboptimal response to ORT
• No urine in pervious 12 hrs.
If restoration is incomplete
If restoration is complete
Reassess the case and give appropriate homoeopathic medicine
Stop treatment

Chapter 10

HYPERTENSION

HYPERTENSION

CASE DEFINITION

Hypertension (HTN) also known as high or raised blood pressure, is a condition in which the blood vessels have persistently raised pressure, putting them under increased stress. The condition is said to arise when the systolic blood pressure is equal to or above 140 mm Hg and/or a diastolic blood pressure equal to or above 90 mm Hg.[1]

INCIDENCE/PREVALENCE

- Hypertension exerts a substantial public health burden on cardiovascular health status and healthcare systems in India.[2,3]
- HTN is directly responsible for 57% of all stroke deaths and 24% of all coronary heart disease (CHD) deaths in India.[4]
- In an analysis of worldwide data for the global burden of hypertension, 20.6% of Indian men and 20.9% of Indian women were suffering from the disease in 2005.[5]
- Overall prevalence for hypertension in India is 29.8%[6]. Significant differences in hypertension prevalence were noted between rural and urban parts as 27.6% and 33.8% respectively.
- Regional estimates for the prevalence of hypertension were: 14.5%, 31.7%, 18.1% and 21.1% for rural north, east, west, and south India; and 28.8%, 34.5%, 35.8% and 31.8% for urban north, east, west, and south India, respectively.

CLASSIFICATION[7]

Depending on the methods of patient ascertainment, hypertension is classified into two types:

- **Essential hypertension/ (Primary or idiopathic hypertension) -** 80 -95% of hypertensive patients are diagnosed with Essential hypertension in which no obvious medical cause is identified. It is likely to be the consequences of an interaction between environmental and genetic factors which increases with age.
- **Secondary hypertension –** 5-20% of hypertensive patients come under this category. A specific underlying disorder causing elevation of blood pressure can be identified. In individuals with secondary hypertension, a specific mechanism for the blood pressure elevation is often more apparent.

---

1 World Health Organization. Q & As on hypertension. Geneva, Switzerland:WHO; 2015[cited 30th May 2016. Updated September 2015] Available from http://www.who.int/features/qa/82/en/

2 Leeder S, Raymond S, Greenberg H, Liu H. A race against time. The challenge of cardiovascular disease in developing economies. New York: Columbia University; 2004.

3 Reddy SK, Shah B, Varghese C, Ramadoss A. Responding to the threat of chronic diseases in India. Lancet 2005; 366(9498):1744–9.

4 Gupta R. Trends in hypertension epidemiology in India. J Hum Hypertens. 2004; 18(2):73–8.

5 Kearney PM, Whelton M, Reynolds K, Muntner P, Whelton PK, He J. Global burden of hypertension: analysis of worldwide data. Lancet 2005; 365:217–23.

6 Anchala R, Kannuri NK, Pant H, Khan H, Franco OH, Di Angelantonio E, et al. Hypertension in India: a systematic review and meta-analysis of prevalence, awareness, and control of hypertension. J Hypertens. 2014;32(6):1170-7.

7 Kotchen TA. Hypertensive vascular disease. In: Fauci AS, Braunwald E, Kasper DL, Hauser SL,Longo DL, Jameson JL, et al. editors. Harrison's Principles of Internal Medicine. 18th ed. New York: Mc Graw Hill;2012: p 2042-59.

According to Joint National Committee (JNC-VII) blood pressure is classified as:[8]

Category	Systolic BP(mmHg)	Diastolic BP(mmHg)
Normal BP	<120	<80
Pre -hypertension	120-139	80-89
Hypertension **Stage 1** **Stage 2**	 140-159 ≥160	 90-99 ≥100

Malignant or accelerated hypertension[7,9] **–** Malignant or accelerated hypertension is diagnosed when there are severe diastolic hypertension usually exceeding 120 to 140 mm of mercury and one or more of the following conditions:

- hypertensive retinopathy with papilledema;
- hypertensive encephalopathy;
- renal involvement;
- acute left ventricular dysfunction-that is, left ventricular failure, pulmonary edema, angina pectoris or myocardial infarction.

AETIOLOGY

Causes/Risk factors of primary hypertension

Non- modifiable factors

- Age
- Positive family history

Modifiable factors

- Obesity
- Increase intake of saturated fat
- Low level of physical activity
- High salt intake
- Smoking
- Psychological stress
- Alcohol consumption

Causes of secondary hypertension[7]

Renal disease

- Renal vascular disease- arteriosclerosis, fibromyalgia
- Renal parenchymal disease (glomerulonephritis), renal cyst (polycystic renal disease), renal tumor (rennin secreting tumor), obstructive uropathy

8 Martin J. Hypertension guidelines: Revisiting the JNC recommendations.The journal of Lancaster general hospital. 2008; 3(3):91-7.

9 Vaziri ND. Malignant or accelerated hypertension. West J Med .1984; 140:575-582.

Endocrine disease

- Adrenal – primary aldosteronism, Cushing syndrome, pheochromocytoma, Congenital adrenal hyperplasia due to 11-β hydroxylase or 17 α- hydroxylase deficiency
- Thyroid, parathyroid – Hypothyroidism, thyrotoxicosis, hyperparathyroidism
- Others- Liddle syndrome, Acromegaly

Neurogenic

- Psychogenic, acute increased intracranial pressure, acute spinal cord section.

Drugs

- Oral contraceptives, anabolic steroids, corticosteroids, NSAIDs, sympathomimetic agents, tri cyclic anti-depressants, cocaine etc.

Pregnancy

- Eclampsia/ Pre-eclampsia

Others

- Co-arctation of aorta
- Obstructive sleep apnea

DIAGNOSIS

Clinical presentation[7]

Most people with hypertension have no symptoms at all; this is why it is known as the *"silent killer".*

However, the patient needs to be assessed fora clinical history, sign & symptoms, BP reading, physical examination, basic investigations toconfirm the diagnosis, other cardiovascular disease risk factors, and secondary causes of hypertension or involvement of target organs.

Clinical History

- Duration of hypertension
- Previous therapy: its response & side effects
- Family history of hypertension & cardiovascular diseases
- Dietary & psychosocial history
- Daily routine and lifestyle
- Other risk factors: weight change, dyslipidemia, smoking, diabetes, physical inactivity etc.
- Evidence of secondary hypertension: like history of renal disease, symptoms of hypo or hyperthyroidism, change in appearance, muscle weakness, snoring, sweating, palpitation, tremor, use of agents that increase blood pressure.
- Evidence of target organ damage: history of transient ischemic attack, stroke, transient blindness, angina, myocardial infarction.

Signs and symptoms

Most of the patients with raised blood pressure have no symptoms. Although following symptoms are important indicators:

- Headache
- Dizziness
- Insomnia
- Lack of concentration
- Loss of memory
- Palpitation of heart
- Nosebleed
- Easy fatigability
- Impotence

Symptoms of hypertensive encephalopathy include[10,11]

- Altered sensorium
- Acute severe headache especially in the occipital region
- Papilloedema
- Transient disturbance in speech
- Paraesthesia
- Fits & loss of consciousness

Physical examination

- Weight, height
- Measurement of blood pressure
- Pulse rate, rhythm & character
- Jugular venous pulse
- Evidence of cardiac enlargement (displaced apex , extra heart sound) or evidence of decompensation (crackle or wheeze on lung auscultation, peripheral oedema)
- Evidence of arterial disease (carotid, renal or abdominal bruit, radio femoral delay, abdominal aortic aneurysm)
- Evidence of kidney disease
- Evidence of abnormality of endocrine system(enlargement of thyroid gland)
- Optic examination of fundi

10 Colledge NR, Walker BR, Ralston SH editors. Davidson's principle & practice of medicine.21st ed. New York: Churchill Livingstone/Elsevier;2010:p 606- 612.

11 Sharifian M. Hypertensive encephalopathy. Iran J Child Neurol. 2012; 6(3): 1-7.

Blood Pressure measurement[9,12]

Steps to ensure accurate blood pressure measurement are given below:

- In ideal situations, instruct the patient to avoid smoking or drinking or drinking caffeinated beverages for 30 minutes before the blood pressure is measured.
- Ask the patient to sit quietly for at least 5 minutes in a chair with feet on the floor, rather than on the examining table.
- Make sure the arm selected is free of clothing. There should be no arteriovenous fistulas for dialysis, scarring from prior brachial artery cut downs, or signs of lymphedema (seen after axillary node dissection or radiation therapy).
- Palpate the brachial artery to confirm that it has a viable pulse.
- Position the arm so that the brachial artery, at the ante-cubital crease, is *at heart level* – roughly level with the 4th interspace at its junction with the sternum.
- If the patient is seated, rest the arm on a table a little above the patient's waist; if standing, try to support the patient's arm at the mid chest level.

Steps for blood pressure measurement:

- With the arm at heart level, center the inflatable bladder over the brachial artery. The lower border of the cuff should be about 2.5 cm above the ante-cubital crease. Secure the cuff tightly. Position the patient's arm so that it is slightly flexed at the elbow.
- To determine how high to raise the cuff pressure, first estimate the systolic pressure by palpation. Feel the radial artery with the fingers of one hand, rapidly inflate the cuff until the radial pulse disappears. Read this pressure on the manometer and add 30 mm Hg to it. It prevents discomfort from unnecessarily high cuff pressures. It also avoids the occasional error caused by an auscultatory gap- a silent interval that may be present between the systolic and the diastolic pressures.
- Deflate the cuff promptly and completely and wait 15 to 30 seconds.
- Now place the bell of a stethoscope lightly over the brachial artery, taking care to make an air seal with its full rim. Because the sounds to be heard, the Korotkoff sounds, are relatively low in pitch, they are generally better heard with the bell.
- Inflate the cuff rapidly again to the level just determined, and then deflate it slowly at a rate of about 2 to 3 mm Hg per second. Note the level at which you hear the sounds of at least two consecutive beats. This is the systolic pressure.
- Continue to lower the pressure slowly until the sounds become muffled and then disappear. To confirm the disappearance of sounds, listen as the pressure falls another 10 to 20 mm Hg. Then deflate the cuff rapidly to zero. The disappearance point, which is usually only a few mmHg below the muffling point, provides the best estimate of true diastolic pressure in adults.
- Read both the systolic and the diastolic levels. Then wait 2 or more minutes and repeat. Take the average the readings. If the first two readings differ by more than 5 mm Hg, take additional readings.

12 Lynn B. Bates' Guide to Physical Examination and History-Taking. Eleventh, North American Edition. Philadelphia: Lippincott Williams and Wilkins;2012.

- When using an aneroid instrument, hold the dial so that it faces you directly. Avoid slow or repetitive inflations of the cuff, because the resulting venous congestion can cause false readings.
- Blood pressure should be taken in both arms at least once. Normally, there may be a difference in pressure of 5 mm Hg and sometimes up to 10 mm Hg. Subsequent readings should be made on the arm with the higher pressure.

  NOTE: Ambulatory BP measurement & patient self-check BP measurement is recommended in selected circumstances which include:

  - Suspected case of white coat hypertension
  - Masked hypertension
  - When patient is improving by the therapy

INVESTIGATIONS[9]

Investigations should be carried out to assess associated clinical disease and end organ damage:

- Urinalysis for blood, protein and glucose
- Blood urea, electrolytes and creatinine
- Serum sodium, potassium, calcium
- Fasting blood glucose
- Serum total and HDL cholesterol, triglycerides
- 12 Lead ECG

Further investigations should be carried on the basis of clinical suspicion:

- Chest X ray (to detect cardiomegaly, heart failure, coarctation of aorta)
- Echocardiogram(to detect left ventricular hypertrophy)
- Renal Ultrasound(to detect renal disease)
- Renal angiography(to detect renal artery stenosis)
- Urinary catecholamine(to detect possible pheochromocytoma)
- Urinary cortisol & dexamethasone suppression test(to detect possible Cushing's syndrome)
- Plasma rennin activity and aldosterone (to detect primary aldosteronism)
- Fundoscopy(to detect retinopathy)

COMPLICATIONS[13]

Organ	Disease condition	History Evaluation	Examination	Investigation
Heart	**Heart failure**	Exertional breathlessness Orthopnea, edema	Pedal oedema, JVP, Chest examination for pulmonary edema	Chest X-ray, ECG, Echocardiography
	Coronary artery disease	History of angina, prior myocardial infarction		Coronary angiography
	Left ventricular hypertrophy		Forceful apical impulse	ECG, Echocardiography
CNS	**Stroke due to cerebral haemorrhage or infarction**		Neurological examination	CT scan, MRI angiography
Kidney	**Progressive renal failure**	Uremic complaints, dyspnoea	Pallor, oedema, peripheral neuropathy, asterixis, uremic odour	Urine analysis, BUN, Creatinine, renal ultrasound
Retina	**Hypertensive Retinopathy**			Fundoscopy **Grade 1-** Arteriolar thickening (silver wiring) **Grade 2-** Arterivenous nipping + Grade1 **Grade 3-** Retinal ischemia (flame shaped or blot haemorrhage& cotton wool exudates) + grade 2 **Grade 4-** Papilloedem + grade 3
Peripheral Blood vessel	**Atherosclerosis**	History of claudication	Assess peripheral pulse, look arterial pulse	Doppler studies

13 National Health Mission. Standard treatment guidelines. Hypertension:p 54- 60 [Internet] [cited on 2015 Mar. 12]. Available from: http://nhm.gov.in/images/pdf/guidelines/nrhm-guidelines/stg/hypertension.pdf.

DIFFERENTIAL DIAGNOSIS[14]

- Chronic kidney disease
- Coarctation of aorta
- Cushing syndrome and other glucocorticoid excess states
- Phaeochromocytoma
- Primary aldosteronism and other mineralocorticoid excess states
- Renovascular hypertension
- Sleep apnoea
- Hyperthyroidism
- Hyperparathyroidism

EVALUATION AND ASSESSMENT

- MINICHAL[15]
- Bulpitt and Fletcher's Specific Questionnaire[16]
- Hypertension Quality of Life (HQALY) questionnaire[17]

RED FLAGS[18]

- Papilloedema
- Severe headache with high blood pressure
- Signs of end organ damage
- Convulsions or coma
- Pre-eclampsia

PREVENTION

To prevent hypertension the person should increase consumption of DASH diet:

- Intake of fruits and fibre rich diet
- Intake of foods rich in anti-oxidants like citrus fruits, papaya, tomatoes, grains, cereals, potatoes, green leafy vegetables
- Exercise and Yoga

---

14 AFMC,Pune in collaboration with MoFHW and WHO country office, India. Standard Treatment guidelines. Hypertension. Pune: AFMC; 2007.

15 Soutello AL, Rodrigues RC, Jannuzzi FF, São-João TM, Martinix GG, Nadruz W Jr, et al. Quality of Life on Arterial Hypertension: Validity of Known Groups of MINICHAL. Arq Bras Cardiol. 2015;104(4):299-307.

16 Gusmão JL, Pierin AM. Bulpitt and Fletcher's specific questionnaire for quality of life assessment of hypertensive patients. Revista da Escola de Enfermagem da USP. 2009;43:1034-43.

17 Dalfó Baqué A, Badia Llach X, Roca-Cusachs Coll A, Aristegui Ruiz I, Roset Gamisans M. Validación del cuestionario de calidad de vida en hipertensión arterial (CHAL) para su uso en España. Relación entre variables clínicas y calidad de vida. Grupo de Investigadores del Estudio CHAL [Validation of the quality of life questionnaire in arterial hypertension (HQALY) for its use in Spain. Relationship between clinical variables and quality of life. Investigator Group of the HQALY study]. Aten Primaria. 2000; 30; 26(2) : 96-103. Spanish.

18 Jacobi T. Red flag symptoms: Hypertension; 2010. [Updated 2010 Jan 29]. [cited on 2015 Mar. 18] Available from: http://www.gponline.com/red-flag-symptoms-hypertension/cardiovascular-system/article/978521

The person should reduce:

- Weight
- Salt
- Stress

The person should avoid:

- Alcohol
- Smoking
- Fried food, Chutneys, Pickles, Papads, Salted nuts, Chips etc.

MANAGEMENT

General management

High blood pressure generally develops over many years,and requires stringent therapeutic lifestyle changes(TLC) for its effective control. A few recommendations are given below[7,8]

Modification	Recommendation	Approx. SBP Reduction Range
Weight reduction	Maintain normal body mass index (Normal range - 18.5 – 24.9 Kg/m^2 or <25 Kg/m^2)	5 - 20 mm Hg / 10 Kg loss of weight
Alcohol consumption (1 drink =30 ml)	Men: consumption limit < 2 drink / day Women or light weight person < 1 drink / day	2-4 mmHg
Adopt DASH diet	Diet rich in fruit, vegetable, low fat dairy product with reduction of saturated & total fat.	8-14 mmHg
Dietary sodium intake reduction	Reduce dietary sodium intake < 100 mmol/ day (normal- 2.4g sodium or 6g sodium chloride)	2-8 mmHg
Physical activity	Do regular aerobic activity like brisk walking at least 30 min /day most days of the week	4- 9 mmHg
Tobacco cessation	Smoking cessation may not directly involve in BP reduction but it markedly reduces cardiovascular risk.	

Homoeopathic management

Management of hypertension should be done with caution keeping in mind its natural history and complications. TLC when given along with homoeopathic treatment can help in managing the condition and prevent progression of disease. There are number of medicines available in homeopathic literature[19,20,21] for management & treatment of hypertension. Around 140 remedies are given in Synthesis repertory under the rubric 'hypertension'. Our well known polychrest medicines are useful as constitutional remedies to manage the patient holistically, nonetheless, nosodes, and organ remedies are alsoable todecrease the blood pressure of the patient, when indicated.

Sudden increase in blood pressure requires urgent attention and intervention. Acute attack of hypertension can be controlled by acute medicines like. ***Adonis, Allium sativa:*** Useful in hypertension along with history of raised cholesterol. ***Amyl nitrosum:*** Useful in hypertension associated with angina; can dilate the blood vessel. ***Glonoine:*** High blood pressure from bad effects of sunstroke. ***Rauwolfia serpentina:*** High blood pressure without marked atheromatous changes in the vessels. ***Viscum album, Spartium scoparium:*** Useful in renal hypertension. ***Passiflora incarcinata, Crategus*** (Heart tonic): lowers down the blood pressure; good for arteriosclerosis and angina pectoris; said to have a solvent power upon the crustaceous and calcareous deposits in arteries etc. These medicines may cure the case if symptom similarity is found but mostly these medicines are used for providing palliative relief to the patient. This may be followed by a constitutional treatment once the acute phase has been controlled. Various research studies in homoeopathy[22-34] on hypertension show benefits from medication however long-term benefits require to be studied.

19 Clarke JH. A Dictionary of Practical Materia Medica, Vol-3.New Delhi: B. Jain Publishers;2014.

20 Allen HC. Allen's Keynotes- Rearranged and classified with leading remedies of the Materia Medica and bowel nosodes. 10th Reprint edition; 2006.

21 Boericke W. Boericke's New Manual of Homoeopathic Materia Medica with Repertory: Third Revised & Augmented Edition based on Ninth Edition. New Delhi: B. Jain Publishers; 2010.

22 Mehra P. Usefulness of homeopathy in essential hypertension: an exploratory interventional trial. Homeopathy.2014;103(1): 88.

23 Poruthukaren KJ, Palatty PL, Baliga MS, Suresh S.Clinical evaluation of Viscum album mother tincture as an antihypertensive: a pilot study. J Evid Based Complementary Altern Med.2014 ;19(1): 31-5.

24 Schröder D, Weiser M, Klein P. Efficacy of homeopathic Crataegus preparation compared with usual therapy for mild (NYHA II) cardiac insufficiency: results of an observational cohort study.Eur J Heart Fail. 2003; 5(3): 319-26.

25 Saha S, Koley M, Hossain S I, Mundle M, Ghosh S, Nag G , Datta, et al. Individualized homoeopathy versus placebo in essential hypertension: A double-blind randomized controlled trial.Indian Journal of Research in Homoeopathy. 2013;7(2):62-71.

26 Baig H, Singh K, Sharma A, Kaushik S, Mishra A, and Chugh S. Essential Hypertension. Clinical Research Studies - Series II,CCRH. 2009:29-41.

27 Lakhera BC, Dhawan IM, Manjushree, Kaushik S, Mishra A, and Chugh S. Essential Hypertension (Drug related study) Clinical Research Studies-Series II. :CCRH.2009:43-9.

28 Rastogi D P, Baig H. Rauwolfia serpentina (Aqua): A New Approach in the Treatment of Hypertension in Homoeopathy: CCRH Quarterly Bull.1996; 18(1&2):22-4.

29 Mahmoudian A. Homeopathy effect on high blood pressure. Journal of Research in Medical Sciences. 2004;6:315-6.

30 Singh R K, Kasliwal R R. Efficacy of homoeopathic drugs in the treatment of essential hypertension: A study in a specialized cardiac hospital.Focus on Alternative and Complementary Therapies. 2003;8(4).

31 Dutta S, Ganguly S, Mukherjee SK, et al. Efficacy of individualized homeopathic medicines in intervening with the progression of pre-hypertension to hypertension: A double-blind, randomized, placebo-controlled trial. Explore. 2022;18(3):279-286.

32 Varanasi R, Kolli R, Rai Y, et al. Effects of individualised homeopathic intervention in Stage I essential hypertension: A single-blind, randomised, placebo-controlled trial. Indian J Res Homeopathy. 2020;14(1):3-14.

33 Sadhukhan S, Singh S, Michael J, et al. The Journal of Alternative and Complementary Medicine. 2021. 27(6):515-521.

34 Bagadia L. A Randomised Controlled Trial Using Individualised Homeopathic Treatment for Modifying Anger and Blood Pressure in Patients with Essential Hypertension – Comparison Against Standard Care Treatment. Homeopathy. 2020; 109(01): A1-A28.

Indications of a few important medicines for the management of hypertension are given below:

Medicines	General indications	Characteristic particulars
Aurum metallicum	*Hot patient; ailments from grief, disappointed love, business reversals and humiliation; craving for and better from open air; egotism, haughty and arrogant, Spiritual inclination and desire for prayer or meditation, many complaints come on only in winter; from sunset to sunrise, cold bathing; depressive, hopeless, constant desire to commit suicide*	• It is indicated in hypertension due to valvular lesions and arteriosclerosis • Pulse small, feeble, rapid and irregular with visible beating of carotid and temporal arteries • Violent palpitation with congestion of blood in head & chest after exertion which compels the patient to stop walking or motion • Sensation as if heart stood still, as though it ceased to beat and then it suddenly gave a hard thump • Worse: from emotions, mental exertion, cold weather, sunset to sunrise. Better: open air
Baryta muriatica	*Lesions of the aged who are physically and mentally dwarfish; Arterio - sclerosis and cerebral affections due to this condition; maniac states, especially when sexual behavior becomes prominent*	• Hypertension due to vascular degeneration when systolic pressure is high with comparatively low diastolic pressure attended by cerebral & cardiac symptoms • Indurated and narrowing of the cardiac orifice with pain, immediately after eating, and epigastric tenderness • Headache, but without acute crisis, occurring in old people; heaviness rather than pain • Icy coldness of body, with paralysis
Natrum muriaticum	*Hot patient; poorly nourished, great emaciation (marked on neck); losing flesh while living well; craving for salt; aversion to bread and fatty things; constipated, increased thirst; mapped tongue with red insular patches; melancholic; sad, plays alone; Irritable, cross, cries when spoken to; awkward, hasty, drops things from nervous weakness; disposition to weep without cause, consolation aggravates*	• Tachycardia • Heart and chest feel constricted; sensation of coldness in the heart. Fluttering, palpitating; intermittent pulse • Heart's pulsations shake body. Intermits on lying down • Throbbing, blinding headache; aches as if a thousand little hammers were knocking on the brain, in the morning on awakening; worse sunrise to sunset

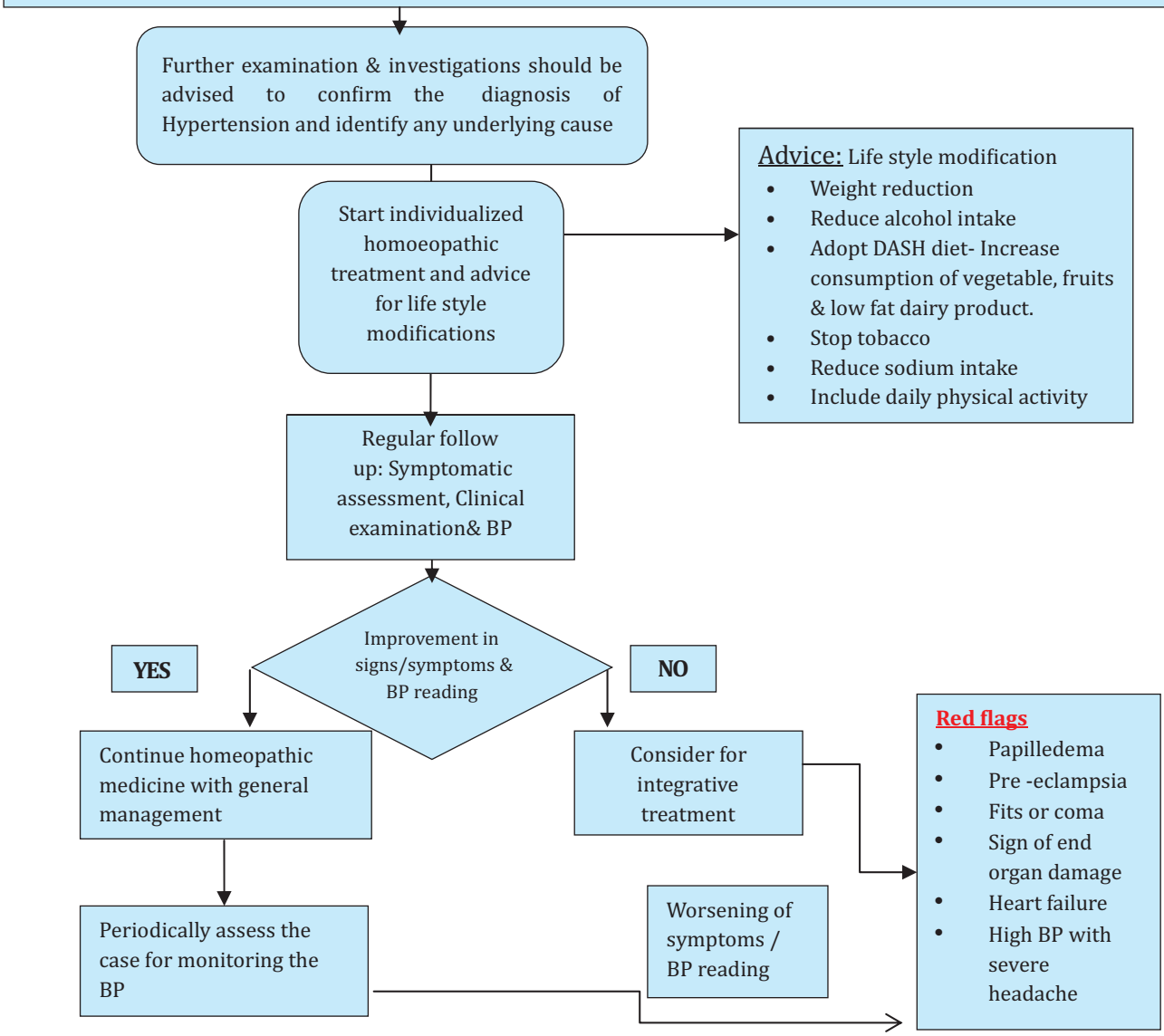
Medicines	General indications	Characteristic particulars
Glonoinum	*Confusion with dizziness; confusion as to location; Lost in well known places. General worse from sun; symptoms come and go with sun*	• Indicated in high blood pressure which may occur from the bad effects of mental excitement, fear, fright & sunstroke • Face flushed with congested & throbbing headache. Head feel heavy cannot lay on pillow & cannot bear any heat about head. The chest feel congested or hot, with a pounding or irregular heartbeat. Pulse accelerated; rises and falls alternately • Hypertension with extreme weakness, irritability and confusion
Crategus	*Irritability, crossness, melancholy, hurried, flurried feeling; with rapid action of heart; an unusual rush of blood to the head with confused feeling; followed by a feeling of quiet and calmness mentally*	• Act as heart tonic, lower down the blood pressure • Clinically used for arteriosclerosis, angina pectoris • Pulse accelerated, irregular, feeble and intermittent • Pain in the region of heart & under clavicle
Gelsemium	*Insidious onset of complaints; aching, tired, heavy, weak and sore; tremors; thirst less; dull, drowsy and dizzy; nervous, desires to be held, greatdepression from heat of sun or summer*	• Complaint occur from bad effect of emotional excitement, fear, fright , exciting news etc. • A feeling as if it were necessary to keep in motion, or else heart's action would cease; Slow pulse
Rauwolfia serpentina	*Irritative condition of central nervous system; insanity; violent maniacal symptoms*	• High blood pressure without marked atheromatous changes in the vessels
Veratrum album	*Chilly patient; coldness, weakness and cyanosis is the trio of the remedy; thin, anaemic; great prostration with vertigo, pale face and clean tongue; collapse; cold perspiration on forehead; voracious appetite; craves fruits, juicy and cold things, ice and salt; aversion to warm food; frenzy, shrieks, curses, desire to cut and tear things, howling all night*	• Palpitation with anxiety and rapid audible respiration; pulse irregular, feeble • Intermittent action of heart in feeble persons with some hepatic obstruction • Cold perspiration on the forehead; with nearly all complaints

ALGORITHM OF TREATMENT PROCESS FOR HYPERTENSION

Diagnosis through clinical signs and symptoms:
Asymptomatic or may have:

- Headache (non-specific)
- Nausea & vomiting
- Visual disturbance
- Somnolence
- Dizziness
- Insomnia
- Lack of concentration
- Loss of memory
- Breathlessness
- Palpitation of heart
- Nosebleed

Check –For BP. BP should be measured at least 2 times at the interval of 15mins before diagnosing hypertension.


Further examination & investigations should be advised to confirm the diagnosis of Hypertension and identify any underlying cause
Start individualized homoeopathic treatment and advice for life style modifications
Advice: Life style modification
Weight reduction
Reduce alcohol intake
Adopt DASH diet- Increase consumption of vegetable, fruits & low fat dairy product.
Stop tobacco
Reduce sodium intake
Include daily physical activity
Regular follow up: Symptomatic assessment, Clinical examination& BP
Improvement in signs/symptoms & BP reading
YES
NO
Continue homeopathic medicine with general management
Consider for integrative treatment
Red flags
Papilledema
Pre -eclampsia
Fits or coma
Sign of end organ damage
Heart failure
High BP with severe headache
Periodically assess the case for monitoring the BP
Worsening of symptoms / BP reading

Chapter 11

IRRITABLE BOWEL SYNDROME

IRRITABLE BOWEL SYNDROME

CASE DEFINITION[1]

Irritable bowel syndrome (IBS) is a chronic functional bowel disorder in which abdominal pain or discomfort is associated with defecation and or change in bowel habits often in the absence of detectable structural abnormalities. Bloating, distension and, disordered defecation are the commonly associated features.

INCIDENCE/PREVALENCE

- Depending on the diagnostic criteria employed, IBS affects around 11% of the population globally. Around 30% of people who experience the symptoms of IBS will consult physicians for their IBS symptoms.[2]
- IBS affect 10-20% population of western countries with female predominance whereas in India, 4.2 -7.9% population is affected by IBS with male predominance[2]. IBS is more common in the younger age group.[3]

AETIOLOGY/RISK FACTORS[3]

The aetiology of IBS is uncertain and likely multifactorial. There are several mechanisms which are responsible for IBS:

1. **Visceral hypersensitivity -** Visceral hypersensitivity is responsible for pain in the abdomen in IBS which occurs due to hypersensitivity of peripheral and CNS due to inflammatory or non-inflammatory agents.
2. **Abnormal gut motility -** Gut motility is regulated by sympathetic & parasympathetic nerves through serotonin mediator. Mental stress, anxiety, or other psychiatric illnesses (panic disorder, depression etc.) affect the sympathetic system & serotonin levels which leads to abnormality in gut motility.
3. **Small intestinal bacterial overgrowth (SIBO) -** About 84% of patients with IBS are found to have small intestinal bacterial overgrowth. In India, SIBO is acommon cause of IBS.
4. **Psychosocial factor -** Patients with a history of physical or sexual abuse, loss, or separation during childhood & conflicts in interpersonal relationships are at increased risk of IBS.
5. **Genetic factor -** Studies suggest that 33% of patients with IBS have a positive family history.
6. **Food allergy or intolerance -** Certain foods (like chocolate, spice, fat, milk, alcohol, cabbage, beans etc.) lead to a hypersensitivity reaction in the body & mast cell degranulation and thus trigger IBS.

---

1 World Gastroenterology Organization Global guideline. Irritable bowel syndrome: a global perspective [Internet]. 2009 [cited 2015 Mar. 12]. Available from http://www.worldgastroenterology.org/assets/downloads/en/pdf/guidelines/20_irritable_bowel_syndrome.pdf

2 Canavan C, West J, Card T. The epidemiology of irritable bowel syndrome. Clin Epidemiol. 2014; 6: 71–80.

3 Upadhyay R, Singh A. Irritable bowel syndrome: The Indian scenario [Internet]. [cited 2015 Mar. 12] Available from: http://www.apiindia.org/medicine_update_2013/chap56.pdf

CLASSIFICATION

Rome III criteria divide irritable bowel syndrome (IBS) based on predominant stool pattern as[1,4,5]

1. Diarrhea predominant IBS (IBS- D) : Loose stool >25% of the time and hard stool<25% of the time. One-thirdof cases have this type of IBS. This condition is more common in males.
2. Constipation predominant IBS (IBS-C) : Hard stools >25% of the time and loose stool <25% of the time. One-thirdof cases have this type of IBS. This condition is more common in females.
3. Mixed IBS (IBS-M): Hard or lumpy stool with at least 25%, and loose or watery stool with at least 25% of bowel movements.
4. Un-subtyped IBS: Insufficient abnormality of stool consistency to meet criteria for IBS-C, -D, or -M.

DIAGNOSIS[1,4]

Diagnosis of IBS is mostly done based on clinical history.

Clinical presentation[1]

1. Common symptoms of IBS which help in diagnosis are:
   - Abdominal pain or discomfort
   - Disordered bowel habits: abnormal stool (hard or loose stool), abnormal stool frequency (less than 3 times/week or more than 3 times/day), straining for defecation, feeling of incomplete evacuation, the passage of mucus per rectum and urgency
   - Dyspepsia
   - Heartburn
   - Bloating
2. Duration, modalities, and associated features:
   - Symptom present more than 6 months
   - Stress aggravates the symptom
   - Aggravation after a meal
   - Associated with anxiety, depression, or other psychological conditions
3. Other symptoms which may be associated are:
   - Dyspepsia
   - Heartburn
   - Nausea and vomiting
   - Lethargy

---

4 David Q, Shih, Lola Y. All Roads Lead to Rome: Update on Rome III Criteria and New Treatment Options Kwan Gastroenterol Rep. 2007 WINTER; 1(2): 56–65.

5 Longstreth GF, Thompson WG, Chey WD, Houghton LA, Mearin F, Spiller RC. Functional bowel disorders. Gastroenterology. 2006;130(5):1480–91.

- Backache
- Urinary frequency
- Dyspareunia (in women)
- Insomnia

DIAGNOSIS CASCADE[1]

	Ask for abdominal pain/discomfort, disordered bowel habits, dyspepsia, heartburn, nausea, vomiting, blood in stool, fever accompanying lower abdominal pain, relation to menstruation, and relation to: • Drug therapy • Consumption of foods that are known to cause intolerance (especially milk), artificial sweeteners, dieting products, or alcohol • Visiting the (sub-) tropics Abnormal eating habits: • Irregular or inadequate meals • Insufficient fluid intake • Excessive fibre intake • Obsession with dietary hygiene
Psychological factors	Ask for anxiety, depression, somatization, hypochondriasis, symptom-related fears, or any other unexplained symptoms
Family history	Inquire about Inflammatory bowel disease, Colon cancer, Colorectal malignancy
Physical examination	A general examination is carried out for signs of systemic disease • Abdominal examination: o Inspection o Palpation o Auscultation • Examination of the perianal region: o Digital rectal examination

INVESTIGATIONS

- Full blood count, ESR, C - reactive protein
- Stool test for occult blood, ova & parasite
- Serum biochemistry, Thyroid function tests
- Colonoscopy, biopsy
- Liver Function Tests
- Abdominal ultrasound

- Endoscopy
- Faecal inflammation marker

Note: Investigations or tests are less recommended in clear cases of IBS but when warning signs or symptoms are present then tests are advised to exclude other conditions to make the diagnosis.

DIFFERENTIAL DIAGNOSIS[1]

S. No.	Suspected Disease	Symptoms & diagnostic test for confirmation
1.	Coeliac sprue/ gastric enteropathy	Chronic diarrhoea *Diagnostic test- Small bowel biopsy*
2.	Lactose intolerance	Bloating, flatulence, diarrhoea from consumption of dairy products *Diagnostic test- Hydrogen breath test*
3.	Inflammatory bowel disease	Diarrhoea > 2 week Rectal bleeding Inflammatory masses, weight loss *Diagnostic test- small* bowel barium radiograph, Sigmoidoscopy
4.	Colorectal carcinoma	Affect older age initial IBS-like symptoms Passage of blood in faeces Unintended weight loss *Diagnostic test-* Colonoscopy, Biopsy
5.	Acute diarrhoea due to bacteria or protozoa	Acute onset of diarrhoea *Diagnostic test-* Stool examination
6.	Diverticulitis	Left side abdominal pain Fever *Diagnostic test-* Ultrasonography
7.	Pelvic inflammatory disease	Lower abdominal pain Fever Cervical motion tenderness *Diagnostic test-* Ultrasonography
8.	Ovarian cancer	Bloating, increased abdominal size, and pain in the pelvic region *Diagnostic test-* Ultrasonography, Tumor markers

EVALUATION AND ASSESSMENT[6]

- Functional bowel disorder severity index[7]
- IBS-QOL questionnaire[8]

6 IBS patient: their illness experience and unmet need, IFFGD and the UNC center for functional GI and motility disorders. [Internet] [cited 2015 March 12] Available from: www.aboutibs.org/pdfs/IBS patients. pdf

7 Drossman DA, Li Z, Toner BB, Diamant NE, Creed FH, Thompson D, Read NW, Babbs C, Barreiro M, Bank L, et al. Functional bowel disorders. A multicenter comparison of health status and development of illness severity index.Dig Dis Sci.1995 May;40(5):986-95.

8 Information Sheet on the irritable bowel syndrome-Quality of Life Measure (IBS-QOL). University of Washington, USA. [Internet] Available from: depts.washington.edu/seaqol/docs/IBS-QOL_Info. pdf

RED FLAGS[1,9]

- Unintended weight loss
- Persistent or progressive pain
- Rectal bleeding
- High-grade fever
- Abdominal /rectal masses
- Raised inflammatory markers
- Nocturnal or large volume (>300ml/day) diarrhoea

PREVENTION

- Regular relaxing exercise, yoga & meditation help to reduce the mental stress
- Different therapies can be used to reduce stress like cognitive behavioural therapy, relaxation therapy, hypnotherapy, psychotherapy
- Maintain sleep pattern
- Eat a healthy balanced diet including fibre in food

MANAGEMENT

General management

Patients with IBS have a poor quality of life with a severe impact on their social and economic burdens. Its pathogenesis remains evolutional, involving biological, psychiatric, and social factors. The bio-psychosocial dysfunctional model has thus attempted to integrate all the above-mentioned mechanisms to understand how IBS can develop under such complex interactions.[10] Management of this condition should thus address all the above factors in a holistic approach. An integrative approach to treatment can thus play the desired role in this condition.

IBS is affected by lifestyle, nutrition, stress, and emotions. Initial IBS management includes education, reassurance, and investigation of psychosocial issues. Information to the patient regarding the triggering factors of IBS along with advice regarding diet etc. as given below is essential:

Dietary management[11,12]

- Consumption of a balanced diet
- Avoid foods which trigger the disease condition like fat diet, fad diet, cabbage, beans, and legumes.

---

9 Black TP, Catherine SM, Jack A Di Palma. "Red flag" Evaluation yield in irritable bowel syndrome, Division of gastroenterology, University of south alabama college of medicine. Mobile, Alabama, USA. [Internet] [cited 2015 March 19] Available from: http://www.jgld.ro/2012/2/9.pdf

10 Chang FY. Irritable bowel syndrome: The evolution of multi-dimensional looking and multidisciplinary treatments. World J Gastroenterol. 2014; 20(10): 2499–514.

11 Irritable Bowel Syndrome (IBS): Introduction. [Internet][cited 2015 March 19] Available from: http://www.hopkinsmedicine.org/gastroenterology_hepatology/_pdfs/small_large_intestine/irritable_bowel_byndrome_IBS. pdf

12 Talley NJ. Functional Gastrointestinal disorders: Irritable Bowel Syndrome, Dyspepsia and non-cardiac chest pain. In Goldman L, Ausiello D. Cecil Medicine, 23rd edition, vol. I, New Delhi; Elsevier: pg. 990-94.

- Maintain regular meal timings
- Include a fibre-rich diet & bulking agents like psyllium fiber as it relieves constipation. Fibre content must be increased slowly to reduce bloating & flatulence
- Exclusion of milk products from the diet if lactose & fructose intolerance is elicited
- Intake of sufficient fluid daily

Lifestyle and Psychological management[8,9]

- Inquiry into stressful factors & their resolution
- Advice for exercise, yoga, and meditation practices on daily basis. Advice to the patient about cognitive behaviour therapy, psychodynamic interpersonal therapy, and relaxation training to reduce stress if required
- Regularity in sleep pattern and meal timings

Homoeopathic management

Homoeopathy is truly a holistic form of treatment, addressing not only the bowel symptoms but also the psyche and the other extra-bowel symptoms that may be present in each individual which can help in selecting individualized homoeopathic medicine. Homoeopathic research studies[13-22] on IBS have shown positive treatment implications. There are many medicines[23-25] available in the homoeopathic literature which can be selected based on the presenting totality of each case for treatment of this syndrome. Synthesis repertory enlists around 584 medicines under the rubric – "diarrhoea", 434 medicines under the rubric"constipation", 121 remedies for "alternate constipation & diarrhoea" and around 7 medicines for "stool ameliorate the pain". A few important

---

13 Gray J. How I treat irritable bowel disease: A survey of 25 consecutive patients, British homoeopathic journal, 1998; 87(4):195-202.

14 Lewith GT, Irritable bowel syndrome the complementary approaches considered, Complementary Therapies in Medicine, 1995; 3(4): 220-23.

15 Oberai P, Dissertation Scope of homoeopathic medicines in the cases of irritable bowel syndrome with reportorial analysis [M.D. Thesis] Unpublished;2009

16 Peckham EJ, Relton C, Raw J, Walters C, Thomas K, Smith C, et al. Interim results of a randomized controlled trial of homoeopathic treatment for irritable bowel syndrome. Homeopathy.2014;103(3):172-7.

17 CCRH. Irritable bowel syndrome. CR Studies –Series II. 2010; 17-23.

18 Rahlfs VW, Mossinger P. Asa foetida bei Colon irritabile. Doppelblindversuch [Asa foetida in the treatment of the irritable colon: a double-blind trial (author'stransl)]. Dtsch Med Wochenschr. 1979 Jan 26;104(4):140-3. German. doi: 10.1055/s-0028-1103859. PMID: 365493.

19 Rahlfs VW, Mossinger P. Zur Behandlung des Colon irritabile. Ein multizentrischer plazebo-kontrollierter Doppel blind versuch in der Allgemeinen Praxis [Treatment of irritable colon. A multicenter placebo-controlled double-blind study in general practice]. Arzneimittelforschung. 1976;26(12):2230-4. German. PMID: 798592.

20 Martínez-Islas BR, Medel-Flores O, Perez Soto E, Garcia-Vivas JM, Hernandez-Ruiz G, Sanchez-Monroy V. Evaluation of Individualized Homeopathic Treatment in Patients with Irritable Bowel Syndrome: A Pilot Study. Altern Ther Health Med. 2021 Jun;27(S1):158-161. PMID: 33711816.

21 Das DAD, et al. Efficacy of individualized homeopathic medicines in irritable bowel syndrome: A double-blind randomized, placebo-controlled trial. Explore (NY). 2022 Oct 19.

22 Nahar L, Paul S, Chattopadhyay A, Koley M, Saha S. An open-label randomized pragmatic non-inferiority pilot trial to compare the effectiveness of Dysentery compound with individualized homeopathic medicines in irritable bowel syndrome. J Complement Integr Med. 2019 Jun 14;16(4).

23 Clarke JH. A Dictionary of Practical Materia Medica, vol-3. New Delhi: B. Jain Publishers; 1995.

24 Allen HC. Allen's Keynotes- Rearranged and classified with leading remedies of the Materia Medica and bowel nosodes. 10th Reprint edition. Jan 2006.

25 Boericke W. Boericke's New Manual of Homoeopathic Materia Medica with Repertory: Third Revised & Augmented Edition based on Ninth Edition. New Delhi: B. Jain Publishers; 2010.

remedies which can be used in the treatment of IBS include. ***Antimonium crudum:*** indigestion after a huge meal along with alternate constipation and diarrhoea. ***Staphysagria:*** IBS caused by suppressed anger. ***Arsenicum album:*** intolerable abdominal pain with diarrhoea, restlessness & excessive thirst in sips. ***Aloe socotrina:*** IBS with abdominal pain, gas formation, diarrhoea and want of confidence in sphincter ani. ***Carbo vegetabilis:*** flatulent colic, distended abdomen when simplest food disagrees & eructations give temporary relief.

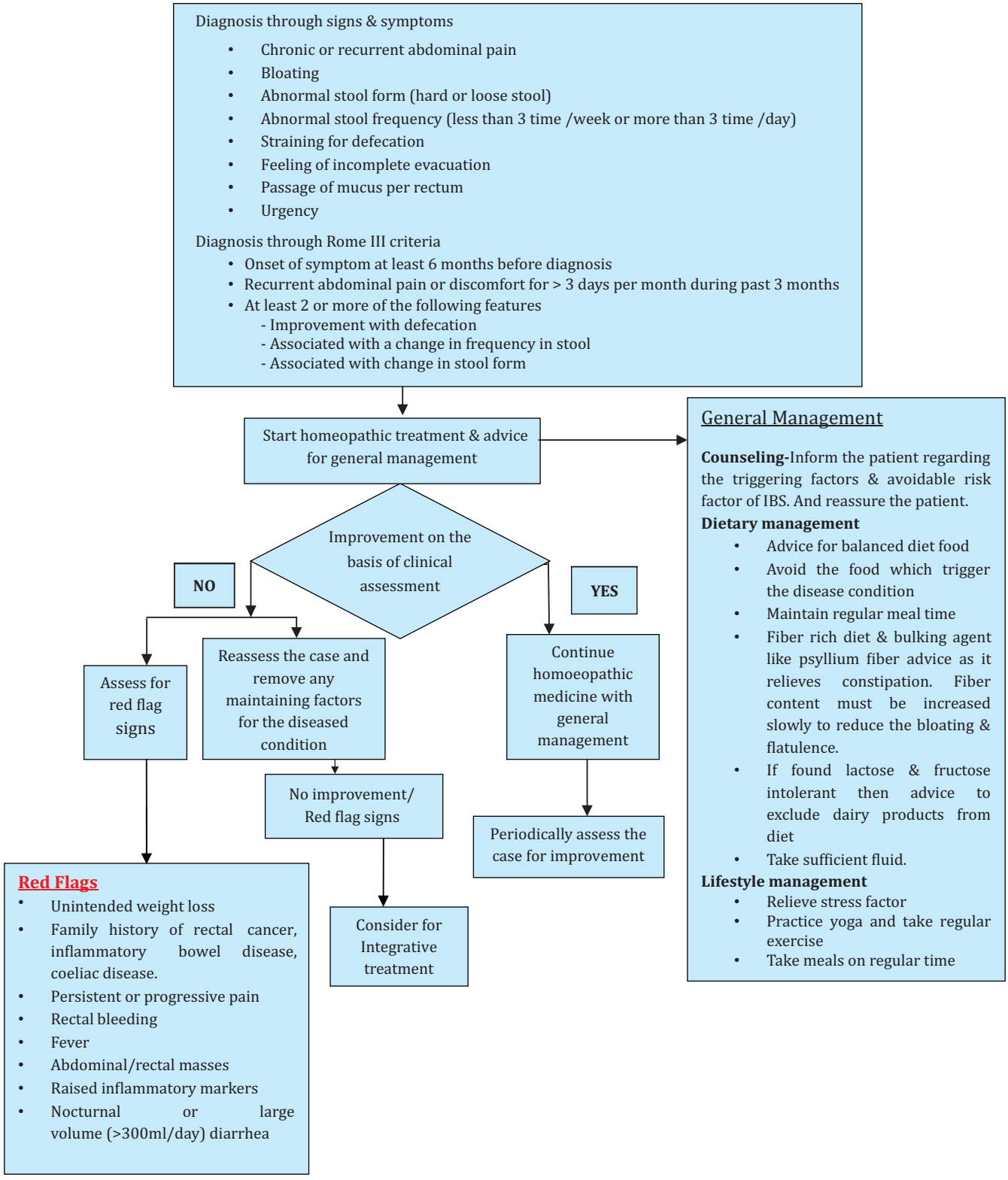
Indications of a few important homoeopathic medicines for irritable bowel syndrome are given below:

Medicines	General indications	Characteristic particulars
Argentum nitricum	*Hot patient; acute or chronic diseases from unusual or long-continued mental exertion; withered, dried-up, old-looking patients; great desire for sweets, aggravation after eating it; incoordination, loss of control and want of balance everywhere, mentally, and physically; time passes slowly; impulsive, fearful and anxious; Gastrointestinal conditions accompanied by nervousness & anxiety. Wants to do things in a hurry, worse from warmth in any form*	• Ailments from taking sweets; mental exertion • Painful spot in the stomach that radiates to all parts of the abdomen, worse by slightest pressure • Belching accompanies most gastric ailments; flatulent dyspepsia; belching after every meal; stomach, as it would burst with wind; belching difficult, finally air rushes out with great violence • Diarrhoea immediately after drinking water and eating too much sweet or salty food • Stool is watery, noisy, flatulent; green like chopped spinach, and shreddy mucus with enormous distension of abdomen
Cinchona officinalis	*Chilly patient: sensitive to draughts of air yet wants to be fanned; face pale, eyes sunken and surrounded by blue margins; intermittent fevers; worse damp weather; extreme debility; periodicity; profuse, exhausting discharges (diarrhoea, sweat); haemorrhages from orifices; desire for sour and sweet things; intolerance to fruits; apathetic, indifferent, taciturn, oversensitive to noise, touch, and jar; aversion to*	• Ailments from fruits, milk, and hot weather • Painless, exhausting diarrhoea • Gurgling and rumbling in the abdomen with the bloated abdomen • Stool with undigested food particles, dark, watery, frothy, and yellow • Diarrhoea worse at night, after the meal

Medicines	General indications	Characteristic particulars
	mental and bodily exertion	
Lycopodium clavatum	*Intellectually keen but physically weak; upper part of body emaciated, lower part semi dropsical; complexion pale, dirty, sallow with deep furrows; looks old; recurrent respiratory and gastro-intestinal affections; a tendency for flatulent dyspepsia; worse from 4 to 8 pm; right-sided complaints or symptoms shift from right to left; desires for warm foods and drinks, sweets; dominating, cranky, lack self-confidence, and precocious*	• Loud rumbling in the abdomen • Bloated and distended abdomen, better by eructation and passing flatus • Constant sensation of satiety; good appetite but a few mouthfuls fill up the throat • Everything tastes sour; eructations, heartburn, water brash, sour vomiting • Constipation; when away from home; with ineffectual urging, rectum contracts and protrudes during stool, developing piles
Nux vomica	*Chilly patient; thin; craves fats, spicy food; tongue coated yellowish in the posterior part; oversensitive to external impressions: noise, odours, light or music; nervous disposition; spare, quick, active, zealous and irritable, impatient, spiteful with violent action*	• Ailments from spicy food, alcoholic drinks • Constipation induced by lazy habits; want of exercise and sluggishness; inattention to nature's call • In inveterate cases who have been over drugged by purgatives; antidotes effects of such medicines • Desires to pass stool frequently; strains at stool, but stool is scanty • Frequent desire from stool; anxious, ineffectual, better for a time after stool; in the morning after rising; after mental exertion; Alternate constipation and diarrhoea • Absence of desire for defecation contraindicates Nux vomica
Pulsatilla nigricans	*Hot patient; marked changeability of symptoms; aversion to fatty foods, warm foods and drinks, dislikes butter; thirstless with great dryness of the mouth; tongue*	• Ailments from fatty food, pastries, and ice • Dyspepsia with bloating and abdominal distention

Medicines	General indications	Characteristic particulars
	coated yellow or whitish; discharges thick, bland, and yellowish green; pains appear suddenly, leave gradually; worse towards evening and in the warm room; better in the open air, by slow, gentle motion and cold applications; desire for company, mild, gentle, affectionate, yielding, weeping disposition	• Diarrhoea: usually at night; watery, greenish - yellow, changeable
Sulphur	*Hot patient; kicks off the cloth at night; dirty filthy; does not want to be washed; lean, thin, stoop-shouldered children who walk and sit stooping; red orifices; desires sweets: when the best-selected remedy fails to improve; restless, quick-tempered*	• Diarrhoea or soft stool every morning, often driving him out of bed in the morning, especially at 5 or 6 am; may have several stools in the morning • Stool highly offensive; the whole family knows when he defecates • Flatus offensive • Itching and burning at the rectum, worse heat, better cold • Redness around the rectum, with itching and burning

ALGORITHM OF TREATMENT PROCESS FOR IRRITABLE BOWEL SYNDROME


Diagnosis through signs & symptoms
• Chronic or recurrent abdominal pain
• Bloating
• Abnormal stool form (hard or loose stool)
• Abnormal stool frequency (less than 3 time /week or more than 3 time /day)
• Straining for defecation
• Feeling of incomplete evacuation
• Passage of mucus per rectum
• Urgency
Diagnosis through Rome III criteria
• Onset of symptom at least 6 months before diagnosis
• Recurrent abdominal pain or discomfort for > 3 days per month during past 3 months
• At least 2 or more of the following features
- Improvement with defecation
- Associated with a change in frequency in stool
- Associated with change in stool form
Start homeopathic treatment & advice for general management
General Management
Counseling-Inform the patient regarding the triggering factors & avoidable risk factor of IBS. And reassure the patient.
Dietary management
• Advice for balanced diet food
• Avoid the food which trigger the disease condition
• Maintain regular meal time
• Fiber rich diet & bulking agent like psyllium fiber advice as it relieves constipation. Fiber content must be increased slowly to reduce the bloating & flatulence.
• If found lactose & fructose intolerant then advice to exclude dairy products from diet
• Take sufficient fluid.
Lifestyle management
• Relieve stress factor
• Practice yoga and take regular exercise
• Take meals on regular time
Improvement on the basis of clinical assessment
NO
YES
Assess for red flag signs
Reassess the case and remove any maintaining factors for the diseased condition
Continue homoeopathic medicine with general management
No improvement/ Red flag signs
Periodically assess the case for improvement
Consider for Integrative treatment
Red Flags
• Unintended weight loss
• Family history of rectal cancer, inflammatory bowel disease, coeliac disease.
• Persistent or progressive pain
• Rectal bleeding
• Fever
• Abdominal/rectal masses
• Raised inflammatory markers
• Nocturnal or large volume (>300ml/day) diarrhea

Chapter 12

LYMPHATIC FILARIASIS

LYMPHATIC FILARIASIS

CASE DEFINITION

Lymphatic filariasis (LF) is an infection of the subcutaneous tissue and the lymphatic system caused by filarial nematodes *Wuchereria bancrofti, Brugiamalayi and Brugiatimori.* People with the disease can suffer from lymphedema and elephantiasis and in men, swelling of the scrotum, called hydrocele. Lymphatic filariasis is a leading cause of permanent disability worldwide. Due to damaged lymphatic system, patients with lymphoedema have frequent attacks of infection causing high fever and severe pain. Patients may be bed-ridden for several days and normal routine activities become difficult. It is considered among 'neglected diseases' as it affects people living in poorest conditions.[1,2]

INCIDENCE/PREVALENCE

- Presently 856 million people in 52 countries worldwide remain threatened by lymphatic filariasis and require preventive chemotherapy to stop the spread of this parasitic infection. In 2000 over 120 million people were infected, with about 40 million disfigured and incapacitated by the disease.[3]
- It is now recognized as the second leading cause of disability in the world. LF is endemic in tropical regions of Asia, Africa, Central and South America. In endemic communities, 10-50% of men and up to 10% of women is affected.[4]
- The World Health Organization (WHO) estimates that South –East Asian countries namely, India, Bangladesh, Maldives, Nepal and Sri Lanka harbours nearly half the world's lymphatic filariasis burden.[5]
- India has a major problem with more than 650 million people at risk being distributed in 257 endemic districts in 21 States/UTs.[6] India loses about 1.2 billion man days due to LF.[7]

PATHOPHYSIOLOGY

Lymphatic filariasis is mosquito borne disease, microfilariae or first-stage larvae of filarial worms are taken up during blood feeding. Humans are inoculated with infective larvae (L3) when female

---

1 The Carter Center. Lymphatic Filariasis Elimination program [Internet]. [Accessed on 24.09.2010]. Available from: http://www.cartercenter.org/health/lf/index.html

2 Govt. of India. National Vector Borne Disease Control Program. Filariasis. [Internet]; [cited on 31 Mar 2018] Available from: https://nvbdcp.gov.in/Write Read Data/l892s/43461824631532409675.pdf

3 The Global Alliance to eliminate lymphatic Filariasis. Facts & Figures [Internet]. [Accessed on 21/04/2010]. Available from: http://www.filariasis.org/pdfs/Press%20Centre/Brochures/Facts Figures_2008.pdf.

4 World Health Organization. Lymphatic filariasis [Internet]. Fact Sheet No. 102. Rev. September 2000. [Accessed on 27 Mar 2018]. Available from: http://www.who.int/mediacentre/factsheets/fs102/en/.

5 The Global Alliance to eliminate lymphatic Filariasis. South-East Asia Programme Review [Internet]. [Accessedon25/04/2010]. Available from: http://www.filariasis.org/all_about_lf/searo_prg.html.

6 National Vector Borne Disease Control. Filaria Endemic Districts [Internet]. [Accessed on 24/08/2022]. Available from: https://nvbdcp.gov.in/index4.php?lang=1&level=0&linkid=453&lid=3733

7 Vector Control Research Centre. Socio-economic burdens and impact of Vector Borne Diseases. [internet] [cited 30 mar 2018]. Available from: http://vcrc.res.in/forms/modulelist.aspx?lid=2081&mid=30

mosquito of several genera (Anopheles, Culex, Mansonia, and Aedes) takes their blood meal[8]. The fourth-stage larvae (moulting stage from L3) and adult worms, whether living or dead, present in the lymphatic vessels are pathogenic[9]. They primarily are responsible for inducing various pathological changes in filariasis summarised as proliferation, dilatation and oedema formation. The following stages occur sequentially in the pathogenesis of lymphatic filariasis.[7]

1. **Dilatation of lymphatic vessels (lymphangiectasia)-** It is caused by
   a) Mechanical damage to lymph vessels due to physical action of constantly motile adult worms (non-inflammatory stage)
   b) By an intense inflammatory reaction provoked by:
      - the presence of the adult worms
      - the developing larvae and metabolic products released during the moulting of the larvae
      - ex-sheathing of microfilariae during moulting

2. **Infection of the lymphatic vessels (lymphangitis)-** It is characterized by the presence of dilated, inflamed and thickened lymphatic vessels associated with erythema, oedema, and tender painful areas.
3. **Obstruction of the lymph nodes-** Obstruction of the lymph flow is caused by:
   a) The presence of worms in the lumen
   b) Endothelial cell proliferation and thickening of lymphatic vessels as well as focal necrosis
   c) Cellular changes, giant cell formation and fibrosis of the affected lymphatic vessels proximal to the worm

Obstruction of lymph nodes shows classical symptoms of elephantiasis.

DIAGNOSIS

Diagnosis of lymphatic filariasis rests upon clinical and epidemiological history, clinical findings and laboratory results.

Clinical presentation

Clinically, lymphatic filariasis is a spectral disease and the clinical manifestations depend on stage of the disease. In endemic population, at a given point of time, each individual will fall into one of the following categories:[10,11]

8 Kazura W James. Resistance to infection with lymphatic dwelling filarial parasite. In: Nutman Thomas B, editor. Lymphatic Filariasis. London: Imperial College Press; 2000: p.84.

9 Parija SC. Textbook of medical parasitology, protozoology and helminthology (Text and color atlas). Third edn. New Delhi: All India Publishers and Distributors; 2008:p-325-51.

10 Kumaraswami V. The Clinical Manifestations of Lymphatic Filariasis. In: Nutman Thomas B, editor. Lymphatic Filariasis.Tropical Medicine Science and Practice. Vol.1. London: Imperial College Press. 2000;103-125.

11 Shenoy RK. Clinical and pamological Aspects of Filarial Lymphedena and Its Manage ment. Korean J Parasitol. 2008 Sep; 46 (3): 119-125.

1. **Endemic normal:** No microfilaraemia and no evidence of disease, those who are free of demonstrable infection and clinical manifestations.
2. **Asymptomatic stage:** Microfilaraemia with no evidence of clinical disease.
3. **Acute filariasis –** With or without microfilaraemia. There are episodes of acute adenolymphangitis(ADL) with filarial fever and lymphoedema.

The lymphoedema of the limbs is commonly graded as follows:

Grade I- Pitting edema, reversible on elevation of the affected limb

Grade II- Pitting or non-pitting edema, which does not reverse on elevation of the affected limb and there are no skin changes.

Grade III- Non-pitting edema that is not reversible, with thickening of the skin.

Grade IV- Non-pitting edema that is not reversible, with thickening of skin along with nodular or warty excrescences- the stage of elephantiasis.

NOTE: These manifestations usually begin in late childhood or early adulthood. Acute episodes recur at irregular intervals ranging from less than once a year to once a month and may continue for life.

4. **Chronic Filariasis**

Chronic filariasis or obstructive phase is mostly amicrofilaraemic and usually takes 10 to 15 years to develop.Genital manifestations (hydrocele, penile or scrotal swellings), chyluria, elephantiasis, secondary infections of skin and exudations are common. There is asymmetrical involvement of legs or arms and in females one or both breasts may be affected.

5. **Occult Filariasis**

It denotes a condition of hypersensitivity reaction of the host to microfilarial antigens. Characteristically, microfilariae are not found in the peripheral blood and the classical features of lymphatic filariasis are absent. Tropical pulmonary eosinophilia (TPE) is the most important manifestation of occult filariasis.

INVESTIGATIONS[12,13]

The standard method for diagnosing active infection is the identification of microfilariae in a blood smear by microscopic examination. The microfilariae that cause lymphatic filariasis circulate in the blood at night (called nocturnal periodicity). Blood collection should be done at night to coincide with the appearance of the microfilariae, and a thick smear should be made and stained with Giemsa or hematoxylin and eosin. For increased sensitivity, concentration techniques can be used.

12 CDC. Parasites – Diagnosis. In. Lymphatic Filariasis. Centre for Disease Control and Prevention, 1600 Clifton Road Atlanta, GA 30329-4027 USA [internet] [1 Apr. 2018] Available from: https://www.cdc.gov/parasites/lymphaticfilariasis/diagnosis.html

13 CCRH. Lymphatic filariasis. Monograph. New Delhi: CCRH; 2010.

Serologic techniques provide an alternative to microscopic detection of microfilariae for the diagnosis of lymphatic filariasis. Patients with active filarial infection typically have elevated levels of antifilarial IgG4 in the blood and these can be detected using routine assays.

- Indirect haemagglutination assay (IHA)
- Indirect fluorescent antibody (IFA)
- Enzyme-linked immunosorbent assay (ELISA)
- Radio-immunoassay (RIA)
- Luminescence immunoassay
- Immunochromatographic test (ICT)

The ELISA and ICT are the most recent assays being used for the detection of CAg in serum. The ICT is a very sensitive, specific and simple method which can detect W. bancrofti CAg. The main advantage is, it can be used in field conditions.

Molecular diagnosis– It is Polymerase chain reaction (PCR) based assays for DNA of W. bancrofti and B. malayi in blood. Studies indicate that this method detects patent infection in almost all infected subjects. The PCR is positive only when microfilarae are found in peripheral blood and hence negative in chronic filariasis.

Imaging methods- Imaging methods have contributed significantly to the diagnosis of lymphatic filariasis. Chest x-ray shows diffuse pulmonary infiltrates in patients with tropical pulmonary eosinophilia (TPE). X-ray examination can also detect dead and calcified worms. Ultrasound with Doppler techniques is used for detection of motile adult worms in the lymphatics of spermatic cord/scrotum/breast (filarial dance sign).

DIFFERENTIAL DIAGNOSIS[11,12]

- Thrombophlebitis
- Infection
- Trauma
- Lymphoedema of malignancy
- Postoperative scarring trauma
- Chronic oedematous states
- Congenital lymphatic system abnormalities

EVALUATION AND ASSESSMENT

- Number of attacks of ADL at a given time point compared to base line
- Periodically measuring lymphoedema at maximal points
- 7D5L instrument[14]
- Modified Dermatology Life Quality Index[15]

PREVENTION AND CONTROL[16]

Global Programme for elimination of Lymphatic Filariasis

- To stop the spread of infection (Interruption of transmission)-To interrupt transmission, districts in which LF is endemic must be identified, and then community wise (Mass Drug Administration) programme should be implemented to treat the entire at-risk population for 4-6 years.
- To alleviate the suffering of affected individuals (morbidity control) of the affected population by home based management of Lymphoedema.

Implementation of Programme of Elimination of Lymphatic Filariasis (PELF)

There are several viable steps for PELF:

- Mapping of Lymphatic Filariasis and Diagnostic tools
- Mass Drug Administration (MDA)
- Disability alleviation
- Social mobilization and advocacy
- Monitoring and evaluation
- Endpoints for PELFs

MANAGEMENT

General management[12]

Disease management is defined as "a system of coordinated health care interventions and communications for populations with conditions in which patient self-care efforts are significant." It is the process of reducing healthcare costs and/or improving quality of life for individuals by preventing or minimizing the effects of a disease, usually a chronic condition, through integrative care[1].

Elimination of this disease of poverty requires giving drugs at least once per year to people who are at risk; of that population, 80% or more need to continue receiving medication on an annual basis for 5

14 Harichandrakumar KT, Krishnamoorthy K, Kumari AK, Das LK. Health status of lymphatic filariasis assessed from patients using seven domains five levels (7D5L) instrument.Acta Trop. 2006 Oct;99(2-3):137-43.

15 Chandrasena TG, Premaratna R, Muthugala MA, Pathmeswaran A, de Silva NR. Modified Dermatology Life Quality Index as a measure of quality of life in patients with filarial lymphoedema. Trans R Soc Trop Med Hyg. 2007;101(3):245-9.

16 World Health Organization. Lymphatic Filariasis elimination in South -East Asia region. SEA-FIL-27. [Internet]. [Accessed on 08.08.10] Available from: http://www.searo.who.int/LinkFiles/New_Lymphatic_Filariasis_Informal_Consultative_meeting_-_India_-_Feb_2000.pdf

or more years to stop transmission

Treatment of lymphatic filariasis plays an important role as resources are mobilized to eliminate this disease. The clinical manifestations of LF are influenced by a variety of factors, including the patient's age and gender, the species and perhaps the strain of the parasite. The anatomic location of the adult worm, previous exposure to the parasite, the immune response and secondary bacterial infections are the factors influencing treatment options.

In general, the goals of treatment for lymphatic filariasis are:

- To prevent, reverse, halt progress of the disease.
- To interrupt transmission of the parasite.
- General measures such as sanitation, personal hygiene and anti-mosquito measures are equally important and must be adopted at both community and individual levels. Advocacy for the use of bed nets or fully covering clothes is important, especially for the male subjects in rural India who are habituated to sleep outside in the open. Patients are advised to avoid triggers as far as practically possible.

Following measures are used as a standard component of lympoedema management:

Breathing exercises- It is also known as complex decongestive physiotherapy (CDP).CDP is used as a treatment method for lymphedema. This technique includes four parts: (a) manual lymph drainage (MLD), (b) compression bandage, (c) skin care, and (d) remedial exercises.[17]

Washing and Emollients- Washing and emollients are used to maintain the integrity of the epidermis. Emollients like lanolin, vegetable oil and petroleum jelly, are particularly useful and important self-help, low-cost interventions in the management of lymphoedema. Bed rest, limb elevation, and compression bandages traditionally have been used for the management of chronic lymphedema.

Health related quality of life

Patients' perception of the impact of disease and treatment on their physical, sexual, psychological and social function and well-being is crucial in the evaluation of health care interventions. Morbidity management programs, therefore, need to include counselling and rehabilitation of the patients and health education to the community to lessen physical and psychological burden caused by enormous disabilities and stigma caused by LF.[7]

Homoeopathic management

Basic tenets of homoeopathic treatment include *individualization, similarity in drug and disease picture based on totality of the symptoms, minimum dose and single medicine at a time.* As per homoeopathic concept of diseases, lymphatic filariasis is *Psoric or Syco-psoric* in nature and has to be treated taking into account these factors.

Early Manifestations: Where disease is usually of shorter duration without chronic manifestations

17 PAZ, Isabel de Almeida, et al. Complex Decongestive Therapy in the intensive care of lymphedema: systematic review. Fisioter. Pesqui. [online]. 2016, vol.23, n.3 [cited 2018-04-01], pp.311-317. Available from: https://www.scielo.br/j/fp/a/LDR87gS5ScxxXGKbGzSVRqn/?format=pdf&lang=en

(like irreversible lymphoedema or hydrocele) the management comprises of-

- **Management of acute attack-** with medicine selected basing upon the acute totality. Rest to the part and elevation of the affected limb or complete bed rest depending on the severity of the attack is advised. Cold compress, ice pack or cooling lotions on the affected part is advocated as lymphangitis causes severe inflammation and burning pain. Adequate fluid intake and nutrition is to be maintained.
- **Management during attack-free stage:** The aim is to prevent further recurrence or reduction of frequency of attacks. After careful analysis, of the patient's mental and physical generals, suitable constitutional medicine is to be prescribed. Frequency and intensity of attacks are to be monitored periodically and compared to baseline information on the same. Aim at controlling further attacks and finally close the treatment with suitable antipsoric remedy.
- Avoidance of trigger factors and anti- mosquito measures are part of general management.

Late Manifestations: Include recurrent attacks of ADL, often very severe, with advanced lymphoedema or elephantiasis. Various skin disorders and infections may accompany.

- The treatment plan includes combating acute attacks, superadded infections, lymphatic abscess, skin infections of elephantoid legs and associated pain, heaviness and other complaints of oedematous parts with indicated remedies for such acute conditions. During intervening periods, the *constitutionally indicated medicines* are employed supported by deep acting medicines.
- The objectives of the treatment include management of the chronic state by controlling the recurrent acute attacks or sufficiently reducing their frequency and intensity; relieving or reducing the lymphoedema depending on what stage it is in and effectively controlling acute conditions.
- It is important to understand that each attack leaves behind more oedema, and the damage is more if intensity of the attack is severe. The improvement is to be measured in terms of number of attacks during each year as compared to the previous year and also at entry level.
- The medicine is continued in successive higher potencies whenever required. If there be no attack after the medicine is given, then sufficient time is allowed before the repetition. If the patient reports the acute attack/s but with less frequency or intensity or both, then the medicine is repeated in next higher potency.
- The medicine may have to be changed as per relationship of remedies or following rules of second prescription, when -
  i) the case does not progress further (no further reduction in duration/frequency / intensity of attacks).
  ii) attacks have been controlled but lymphoedema and pain persist, fully or partially.
  iii) the aim is to check the recurrence of attacks
  iv) the best selected remedies fail to act owing to some acute or chronic miasmatic block or some other obstacles in the way of cure
- When there is only *lymphoedema* without any acute manifestations, constitutional treatment is to be given. In such cases, sometimes medicine is prescribed on pathological basis also, from

a list of well-known organ-remedies like *Hydrocotyle asiatica, Thiosinaminum, Myristica sebifera* and other acute /chronic remedies like *Anacardium, Ars. alb., Bryonia alb., Calc. fluor., Calc. carb* etc. Lymphoedema is to be measured at fixed maximum points (e.g., knee, calf, ankle and foot in case of lower limb) from time to time.

- In all cases of advanced lymphoedema or elephantiasis, foot hygiene is advised. Cleaning the limb with soap and water reduces the chance of infection and subsequent attack. Use of *pressure bandage* during day time and elevation of affected limb is part of management.

Some of the specific medicines are ***Rhododendron chrysanthemum:*** The medicine is of use in scrotal affections – both filarial orchitis and hydrocele; advanced hydrocele responded only partially. Hydrocele, bilateral; induration and swelling. Left testicle swollen, crushing pain in testicles. ***Hydrocotyle asiatica:*** Curative in disorders that exhibit interstitial inflammation and cellular proliferation in any part. Elephantiasis. ***Elaeias guineensis:*** Elephantiasis, skin thickened, itching and hardened.

CCRH has undertaken a number of research studies on lymphatic filariasis.[18-27] Few of the frequently indicated medicines with their indications from these research studiesare enlisted below:

Medicines	General indications	Characteristic particulars
Rhus toxicodendron	*Chilly patient; sore, body bruised and stiff; restless, can't rest in any position; red triangular tip of tongue; worse in damp, cold, rainy weather, during rest and sleep, better by contnued motion; increased thirst; grea apprehension at night, sad, anxious; weeping without knowing why*	• Useful in all stages of lymphatic filariasis, especially acute and acute on chronic • Relieves acute symptoms of lymphangitis, grade I and early grade II lymphoedema and reduced frequency and intensity of such attacks • Acute attacks and severe pains found in filaria brought on by slightest exertion

18 Subramanyam VR, Mishra N, Rai Y, Rakshit G, Pattnaik NM. Homœopathic treatment of filariasis: Experience in an Indian rural setting. British Homoeopathic journal 1990; 79(3): 157-160.

19 Kumar A, Mishra N. Effect of homoeopathic treatment on filariasis: A single blind 69-months follow-up study in an endemic village in Orissa. British Homoeopathic journal.1994; 83(4): 216-219.

20 Boericke W. Boericke's New Manual of Homoeopathic Materia Medica with Repertory: Third Revised & Augmented Edition based on Ninth Edition. New Delhi: B. Jain Publishers; 2007

21 Allen HC. Allen's Keynotes- Rearranged and classified with leading remedies of the Materia Medica and bowel nosodes. 10th Reprint edition. Jan 2006.

22 Clarke JH. A Dictionary of Practical Materia Medica, vol.-3, New Delhi: B. Jain Publishers.

23 CCRH. Filariasis. Clinical Research Studies Series I. 2008.

24 Research studies in filarial. CCRHQB. 1998; 20(1&2):22-24.

25 Kumar A, Mishra S. Effect of homoeopathic treatment on Filariasis. CCRHQB. 2004;26(2):19-22.

26 Gupta J, Manchanda RK, Debata LP, Payal G, Choudhary S, Prusty A, et al. A randomised comparative study to evaluate the efficacy of homoeopathic treatment -vs- standard allopathy treatment for acute adenolymphangitis due to lymphatic filariasis. Indian J Res Homoeopathy. 2018;12:64-74.

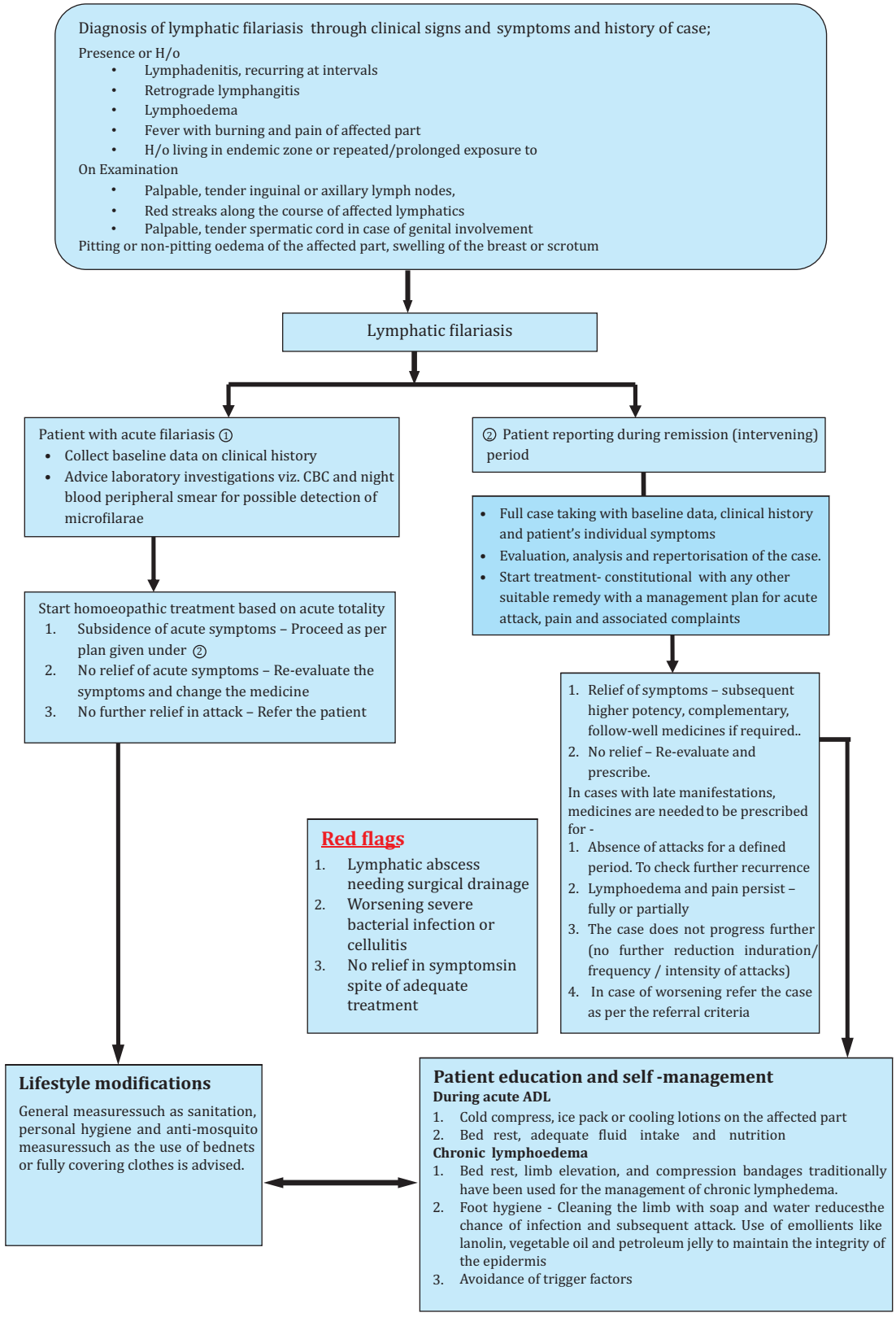
27 Clinical research in filariasis. CCRH QB. 1991; 13(3&4):1-4.

Medicines	General indications	Characteristic particulars
		• Acute lymphangitis with heat, redness, burning, itching and severe pain in the affected part. Scrotum thick, swollen, oedematous; intense itching and severe pain. Painful, chord like lymphatics; painful, swollen inguinal glands; extremely restless due to pain. Urticaria during acute filariasis
Bryonia alba	*Hot patient; dry; excessively thirsty, tendency to constipation, all symptoms worse from least motion; and relief from absolute rest; tongue dry, parched, cracked, thickly white coated; nervous, desire to be in one position quietly, not to be carried; desires open air*	• Acts well in both acute and chronic stages of LF. It reduces grade II lymphoedema which was irreversible on rest; partial reduction of grade III oedema was also noted • Acute attacks especially in hot weather which started gradually, and then progressed • During fever there was great thirst with dryness of mouth, bitter taste and vomiting, anorexia and severe constipation • Slightest movement of the affected limb aggravate the pain
Apis mellifica	*Hot patient; thirstlessness; oedematous, bag like puffy swelling under the eyes, glands enlarged and indurated; worse afternoon; closed, especially warm and heated rooms are intolerable; better from cold application; constant whining, nothing seems to satisfy, irritable, sensitive to touch, cannot bear to be left alone, restlessness and fidgety, awkward, drops things easily from hands, hard to please*	• Useful in grade I and early grade II lymphoedema. Acute inflammation with severe oedema. Affected part invariably looked red and glossy; shiny, sensitive, sore during lymphangitis • Cellulitis with burning pain. Severe burning, itching, redness and heat of the part • Intolerance to heat locally. Desire for cold applications
Pulsatilla nigricans	*Hot patient; Marked changeability of symptoms; aversion to fatty foods, warm foods and drinks,*	• Right sided epididymo - orchitis of filarial origin, when other symptoms matched

Medicines	General indications	Characteristic particulars
	dislikes butter; thirstless with great dryness of mouth; tongue coated yellow or whitish; discharges thick, bland, and yellowish green; pains appear suddenly, leave gradually; worse towards evening and in the warm room; better in open air, by slow, gentle motion and cold applications; desire for company, mild, gentle, affectionate, yielding, weeping disposition	• Pains of affected limb aggravated by keeping the limb in hanging position • Fever appeared with chill, rigor and right inguinal lymphadenitis Patient gets relieved by cold application and open air • Warmth in general aggravates the symptoms
Arsenicum album	*Chilly patient; rapid disproportionate prostration; burning pains better by heat (except headache) and cadaveric odor of discharges and body; increased thirst; drinks often but little at a time; anxiety, anguish and restlessness*	• Useful in elephantoid fever when disease had advanced and there were frequent secondary infections of the affected limb. Elephantiasis; relieves grade III lymphoedema in some cases. Recurrent debilitating filarial fevers with chronic lymphoedema, cases complicated by weeping dermatitis of the oedematous part. Often, the attacks got precipitated by eating stale food • Nocturnal cough, chilliness and extreme restlessness were some of the features associated with acute attacks in chronic stage of Lymphatic filariasis • Ulcers on elephantoid leg, sclerosed skin, dermatitis and various skin manifestations • General or local amelioration by heat, along with extreme debility, it cleared the skin symptoms and checked repeated attacks
Silicea	*Extremely chilly patient; all symptoms worse by cold except stomach complaints, which are ameliorated; profuse, offensive discharges; sweats profusely especially on feet; easy*	• Useful in all grades of lymphoedema • Elephantiasis of limbs, scrotum, hydrocele with recurrent skin infections

Medicines	General indications	Characteristic particulars
	suppuration; glandular affinity; large head and distended abdomen; weak ankles, slow in learning to walk; constipation, stools being partly expelled recede back again; obstinate, head strong, cries when spoken kindly to, nervous, apprehensive, oversensitive, irritable and fearful	• Glandular affections with tendency to suppurate • It helps in healing and healthy granulation of deep lymphatic abscess area after surgical drainage
Mercurius solubilis	*Sensitive to changes of temperature; lax musculature; profuse offensive perspiration; tongue flabby with imprint of teeth; increased salivation; worse at night, wet damp weather; fearful, shy, hurried, violent, impulsive, weak memory, nervous and irresolute*	• Useful in cases of weeping eczema of elephantoid leg • Pustular eruptions on affected part • Lymphatic abscess; swollen glands • Nocturnal aggravation of pain

ALGORITHM OF TREATMENTPROCESS FOR LYMPHATIC FILARIASIS


Diagnosis of lymphatic filariasis through clinical signs and symptoms and history of case;
Presence or H/o
• Lymphadenitis, recurring at intervals
• Retrograde lymphangitis
• Lymphoedema
• Fever with burning and pain of affected part
• H/o living in endemic zone or repeated/prolonged exposure to
On Examination
• Palpable, tender inguinal or axillary lymph nodes,
• Red streaks along the course of affected lymphatics
• Palpable, tender spermatic cord in case of genital involvement
Pitting or non-pitting oedema of the affected part, swelling of the breast or scrotum
Lymphatic filariasis
Patient with acute filariasis ①
• Collect baseline data on clinical history
• Advice laboratory investigations viz. CBC and night blood peripheral smear for possible detection of microfilarae
② Patient reporting during remission (intervening) period
• Full case taking with baseline data, clinical history and patient's individual symptoms
• Evaluation, analysis and repertorisation of the case.
• Start treatment- constitutional with any other suitable remedy with a management plan for acute attack, pain and associated complaints
Start homoeopathic treatment based on acute totality
1. Subsidence of acute symptoms – Proceed as per plan given under ②
2. No relief of acute symptoms – Re-evaluate the symptoms and change the medicine
3. No further relief in attack – Refer the patient
1. Relief of symptoms – subsequent higher potency, complementary, follow-well medicines if required..
2. No relief – Re-evaluate and prescribe.
In cases with late manifestations, medicines are needed to be prescribed for -
1. Absence of attacks for a defined period. To check further recurrence
2. Lymphoedema and pain persist – fully or partially
3. The case does not progress further (no further reduction induration/ frequency / intensity of attacks)
4. In case of worsening refer the case as per the referral criteria
Red flags
1. Lymphatic abscess needing surgical drainage
2. Worsening severe bacterial infection or cellulitis
3. No relief in symptomsin spite of adequate treatment
Lifestyle modifications
General measuressuch as sanitation, personal hygiene and anti-mosquito measuressuch as the use of bednets or fully covering clothes is advised.
Patient education and self -management
During acute ADL
1. Cold compress, ice pack or cooling lotions on the affected part
2. Bed rest, adequate fluid intake and nutrition
Chronic lymphoedema
1. Bed rest, limb elevation, and compression bandages traditionally have been used for the management of chronic lymphedema.
2. Foot hygiene - Cleaning the limb with soap and water reducesthe chance of infection and subsequent attack. Use of emollients like lanolin, vegetable oil and petroleum jelly to maintain the integrity of the epidermis
3. Avoidance of trigger factors

Chapter 13

MENOPAUSE

MENOPAUSE

CASE DEFINITION [1,2]

Menopause is strictly defined as 1 year without menses. In fact, however, the ovaries progressively fail to produce estrogen. This failure often begins in the late 30s, and most women experience near-complete loss of production of estrogen by their mid-50s. The transition from normal ovarian function to ovarian failure is described as the menopausal transition.

INCIDENCE/PREVALENCE [3]

The time of menopause is remarkably stable down the generation and throughout the world. A pan India survey shows average age of menopause of an Indian woman to be 46.2 years which is less than their western counter parts (51 years). In the present day for the management of menopause, age between 45 to 55 years is taken as the limits of normality and those menstruating after 55 years needs investigation to exclude pathology.

CLASSIFICATION

Menopause can be of three types:

1. Natural
2. Premature menopause, if the menopause occurs before the age of 40 years
3. Iatrogenic, due to surgical removal of the ovaries or chemotherapy and radiation to the ovaries

PATHOPHYSIOLOGY

With aging, there is depletion of oocytes and decline in oestradiol which falls below critical level with atrophy of endometrium leading to amenorrhea and menopause. Both FSH and LH are elevated. Post-menopausal ovary produces androstenedione and testosterone and there is excess of androgen. Androstenedione is converted to estrone in adipose tissue so that Estrone (E1) and Estradiol (E2) ratio is reversed. E1 is less active biologically explaining the symptoms due to hormonal deficiencies.

DIAGNOSIS

In most cases, the diagnosis is made based on symptoms given below. Checking FSH level or serum oestradiol, progesterone levels and checking androgen profile as a routine on all peri-menopausal is unnecessary and is costly. So, there should be response to the symptoms, not the biochemistry.[4]

CLINICAL PRESENTATION [2]

- **Menstrual irregularity :** the intervals between periods may be longer or shorter, flow may be scanty to profuse, and some periods may be skipped.

---

1 Goodman NF, Cobin RH, Ginzburg S B, Katz IA, Woode DE. AACE Menopause Guidelines Revision Task Force. AACE Menopause Guidelines. Endo Prac. 2011; 17(Suppl 6): 1-24.

2 CCRH. Menopause – Disease Monograph series-1. New Delhi: CCRH;2011.

3 Ahuja M. Age of menopause and determinants of menopause age: A PAN India survey by IMS. J Mid-life Health [serial online] 2016 [cited 2016 Dec 23]; 7:126-31. Available from: http://www.jmidlifehealth.org/text.asp?2016/7/3/126/191012

4 Australasian Menopause Society. Menopause [internet] [cited 2015 April 13] Available from: http://www.menopause.org.au/consumers/information-sheets/420-diagnosing-menopause

- **Hot flushes and sleep problems :** During late peri-menopause sudden feelings of heat all over or in the upper part of body, flushing of face & neck, red blotches on chest, back, & arms, heavy profuse sweating and cold shivering. Sleep problems are often due to hot flushes or night sweats, but sometimes sleep becomes erratic even without them.
- **Mood changes :** Some women experience mood swings, irritability or increased risk of depression during peri-menopause.
- **Vaginal and bladder problems :** Due to loss of lubrication and elasticity in vaginal tissues intercourse becomes painful, vulnerability to urinary or vaginal infections and urinary incontinence.
- **Decreasing fertility :** As ovulation becomes irregular, ability to conceive decreases. However, pregnancy remains a possibility until no periods for 12 months.
- **Changes in sexual function :** During peri-menopause, sexual arousal and desire may change. But for most women who had satisfactory sexual intimacy before menopause, this will continue through peri-menopause and beyond.
- **Loss of bone :** With declining estrogen levels, one starts to lose bone more quickly than one can replace it, increasing risk of osteoporosis.
- **Changing cholesterol levels :** Declining estrogen levels may lead to unfavorable changes in blood cholesterol levels, including an increase in low-density lipoprotein (LDL) cholesterol — the "bad" cholesterol — which contributes to an increased risk of heart disease. At the same time, high-density lipoprotein (HDL) cholesterol — the "good" cholesterol — decreases in many women as they age, which also increases the risk of heart disease.
- **Urethral Caruncle :** Urethral caruncle is predominantly found in post- menopausal female and most likely represents ectropion of the urethral wall due to post- menopausal regression of the vaginal mucosa. Symptoms may range from mild bleeding to extreme urinary discomfort.
- **Lower genital tract atrophy :** Exact incidence of this condition may not be known but most of the post- menopausal females as well as clinicians have dealt with this.

The long-term complications of ageing and oestrogen deficiency may have greater bearing on a woman's quality and even quantity of life than the acute short-term symptoms at the time of the menopause. Although they remain clinically silent for many years, it may present a far greater problem in terms of morbidity, mortality and economic burden.

Physical examination

A thorough general physical examination is necessary to document changes associated with menopause and to institute effective therapy.

- Nutritional status
- Height: height loss is associated with osteoporosis and spinal compression fractures. Therefore, height should be measured yearly.
- Weight: to counsel the woman about physical exercise

- Body mass index (BMI)
- Waist circumference: to identify truncal obesity
- Pulse
- Blood pressure
- Auscultation of heart and lungs
- *Examination of oral cavity:* atrophy of oral mucosa, tooth decay and tooth loss are common.
- *Cognitive functions:* cognitive decline is unusual, but complaints of forgetfulness are common. The patients who are very much concerned about cognitive decline should be referred to a neurologist.
- *Psychosocial wellbeing:* evaluation of psychosocial wellbeing is an important part of clinical evaluation. Clinicians may directly ask about depression, anxiety and sexual functioning or use a simple questionnaire to assess psychosocial issue.
- *Dermatological examination:* skin changes associated with estrogen deficiency are skin thinning and wrinkling. In addition, other skin lesions are common with ageing and photo ageing. Abnormal nevi or excessive sun exposure require prompt referral to dermatologist for further skin cancer evaluation.
- *Breast examination:* breast tissue and axilla should be carefully inspected and palpated. Nipple discharge, nipple inversion, masses should be documented and evaluated.
- *Pelvic examination:* examination of vulva may demonstrate shrinkage of labia majora, labia minora may shorten or disappear completely and there may be narrowing of introitus. The vulva should be examined for redness, atrophy or scarring. In those with pain, point of pain and any scar tissue should be noted.
- Vaginal examination will reveal loss of rugae, pale, dry vaginal mucosa. Epithelial tissues are friable and submucosal petechial haemorrhages are seen. Vaginal PH is more than 5 and maturation index shows basal cell predominance. Culture of vagina may reveal pathologic bacteria not normally found in vagina. Cervix is inspected and Pap smear is taken.

INVESTIGATIONS

Routine laboratory tests for screening apart from symptomatology include:

- Complete blood count
- Urine examination: routine and culture
- Fasting blood glucose level
- Lipid profile
- Stool for occult blood
- Pap smear
- Ultrasonography including TVS
- Mammogram

Whenever there is abnormality in screening test or there is specific indication following investigations are advised.

1. Thyroid profile
2. Follicle Stimulating hormone
3. Oestradiol
4. Tests to assess increased risk of thrombosis
5. Endometrial biopsy
6. Coloscopy and cervical biopsy
7. Bone mass density

ASSOCIATED CO-MORBIDITIES/COMPLICATIONS

There are major chronic diseases associated with menopause as risk factor which should be interrogated with respect to family history, lifestyle which includes diet, physical activity, addiction and medication such as psychotropic drugs, anti-hypertensives, anti-histaminics and oral contraceptive pills being taken. The risk factors are as follows:

1. Osteoporosis
2. Coronary heart disease
3. Deep vein thrombosis
4. Diabetes mellitus
5. Alzheimer's disease
6. Gynaecological cancers, breast cancers, lung cancer, oral cancer and colorectal cancer

DIFFERENTIAL DIAGNOSIS

- ***Abnormal uterine bleeding :*** anovulation, endometrial hyperplasia, endometrial polyp, cervical cancer, uterine leiomyoma, atrophic endometritis, hormone treatment
- ***Vasomotor instability :*** psychosomatic, stress, anxiety, febrile illness, hyperthyroidism, pheochromocytoma, carcinoid syndrome, leukemia and cancers
- ***Urogenital atrophy :*** bacterial vaginosis, candidiasis, pelvic pathology, marital disharmony, urinary tract infection

EVALUATION AND ASSESSMENT

There are various valuation scales used for assessing severity of disease and prognosis during treatment. These are advised:

1. Menopause Rating Scale (MRS)[5]
2. Utian Quality of Life Scale[6]

5 Heinemann L AJ, Potthoff P, Hermann Schneider PG Menopause rating scale. International version of menopause rating scale. Health and Quality of Life Outcomes.2003;1:28.

6 Utian WH, Janata JW, Kingsberg SA, Schluchter M, Hamilton JC. The Utian Quality of Life (UQOL) Scale: development and validation of an instrument to quantify quality of life through and beyond menopause. Menopause. 2002 Nov-Dec;9(6):402-10.

3. Greene Climacteric scale[7]

MANAGEMENT

General management

Management of menopause includes health promotion, prevention of co-morbid disease and disability postponement as there are several risk factors for other diseases associated with menopause. Multifactorial approach is required for leading a healthy life. For physical fitness a post-menopausal woman must consume fat free milk, green vegetables, fruits for Vitamin E; dark green leafy vegetables for beta carotene; yellow and orange coloured vegetables for Vitamin A; amla, citrus fruits for Vitamin C; ragi, fish, legumes and soya beans for omega 3 fatty acids. Further all these foods contain micronutrients and antioxidants which help to maintain overall including bone health. Participation in regular physical activity (both aerobic and strength exercises) from adolescence life itself brings a number of favorable responses that contribute to healthy aging and healthy menopause.

Homoeopathic management

Homoeopathic research till date on management and other diseases like cancer during menopause indicate positive role.[8-18] There are 109 medicines mentioned in Synthesis repertory[19] for the treatment of menopause. The climacteric period per se is not a disease. It is a physiological epoch, a period of transition just like childhood to adolescence and then adolescence to child-bearing. The changes in the hormonal levels during this time lead to subsequent changes in different parts of the

---

7 Greene J. A factor analytic study of climacteric symptoms. Journal of Psychosomatic Research. 1976; 20:425-30.

8 Cortés E M, González L, Faisal A, Bojalil A. Individualized homeopathic treatment and fluoxetine for moderate to severe depression in peri and postmenopausal women (HOMDEP-MENOP study): a randomized, double-dummy, double-blind, placebo-controlled trial. PLoS One. 2015 Mar 13; 10(3): e0118440.

9 Clover A, Ratsey D. Homeopathic treatment of hot flushes: a pilot study. Homeopathy. 2002 Apr; 91(2):75-9.

10 Thompson EA, Homeopathy and the menopause. J Br Menopause Soc. 2002 Dec; 8(4):151-5.

11 Thompson EA, Reilly D. The homeopathic approach to the treatment of symptoms of oestrogen withdrawal in breast cancer patients: A prospective observational study. Homeopathy. 2003; 92:131-134.

12 Bordet MF, Colas A, Marijnen P, Masson JL, and Trichard M. Treating hot flushes in menopausal women with homoeopathic treatment-Results of an observational study. Homeopathy. 2008; 97:10-15.

13 Relton C, Weatherley-Jones E. Homeopathy service in a NHS community menopause clinic: audit of clinical outcomes. Journal of the British Menopause society. 2005; 11 (2):723.

14 Nayak C, Singh V, Singh K, Singh H, Gupta J, Lamba CD, et al. Management of Distress during Climacteric Years by Homeopathic Therapy. J Altern Complement Med.2011 Nov;17(11):1037-42.

15 Jacobs J, Herman P, Herron K, et al. Homeopathy for menopausal symptoms in breast cancer survivors: a preliminary randomized controlled trial. Journal of Alternative & Complementary Medicine.2005; 11(1): 21-27.

16 Gupta J, Kulshreshtha D, Lamba CD, Gupta P, Shinde V, Wadhwa B, et al. Homoeopathic medicine-Sepia for the management of menopausal symptoms: A multicentric randomized, double-blind placebo-controlled clinical trial. Indian J Res Homoeopathy.2019;13:219-28.

17 Jadhavrao N, Oberai KG, Mukherjee A. The Efficacy of Homoeopathic Medicines in Management of Menopause. J womens Health, Issues Care.2021;10:7.

18 BP Panda, Gohel R, Chaterjee A, Joshi N, Lathiya R.A study of scope of homoeopathy in management of menopausal depression. International Journal of Current Advanced Research.2021;10(9):25074-25078.

19 Schroyens F. Synthesis Repertory ver. 9.1, New Delhi; B Jain Publishers (Pvt.) Ltd.; 2003.

body. Some women are very sensitive to these changes and exhibit 'symptoms' like flushes, sweating, emotional upheavals, etc. All these symptoms can be easily treated with the constitutional medicines or related deep acting chronic medicines. Along with the constitutional medicines, the physician must reassure the patient and give emotional support. When the polychrest or constitutional remedies are not indicated, or fail to relieve in the case, then the indigenous, rare, organ remedies and other medicines could be thought of as required in the case. Few such remedies include ***Amyl nitrosum :*** Climacteric headaches and flushes of heat, with anxiety and palpitations. Congestion of various parts at climacteric, menorrhagia at climaxis and ***Mancinella*** **:** Mentally depressed states at climacteric.

Indications of common homoeopathic medicines as follows:[20-30]

Medicines	General indications	Characteristic particulars
Sepia officinalis	*Chilly patient; thin built with yellow saddle across the upper part of the cheeks and nose; big belly; dry flabby skin; predisposed to take cold at the change of weather; desire for sour food which aggravates; cheerful, active when well but become indifferent and quarrelsome when sick, self-absorbed, sad weeping and indolent*	• Flushes with perspiration worse at night • Dyspareunia from dryness of vagina and bleeding; decreased sexual desire • Aversion to sex, to being touched sexually • Prolapsus uteri, with congestion, with yellow leucorrhoea • Low back pain, better lying on hard floor, pressure
Lachesis mutus	*Hot patient; thin and emaciated; hemorrhagic diathesis; great sensitiveness to touch; hot flushes and perspiration; all complaints worse after sleep; loquacious, jumps from one idea to another, jealous, suspicious, indolent*	• Climacteric troubles, flushes of heat, haemorrhage • Vertex headache, fainting spells, worse pressure of clothes • Coccyx and sacrum pain, especially on rising from sitting posture

20 Allen HC. Keynotes and characteristics with Comparisons of some of the leading remedies of the Materia Medica with Bowel nosodes. Eighth edition. New Delhi: B. Jain Publisher's (P) Ltd.;2008.

21 Boericke W. New manual of Homoeopathic Materia Medica with Repertory. New Delhi: B. Jain Publisher's (P) Ltd.;2010.

22 Pierce WI. Plain talks on materia medica. First Indian edition. New Delhi. Jain Publishers (P) Ltd.;2000.

23 Boger CM. A synoptic key of the materia medica. New Delhi: B. Jain Publishers (P) Ltd.; reprinted 1984.

24 Hering C. Guiding symptoms of our materia medica. New Delhi: B. Jain Publishers (P) Ltd.; reprinted 1989.

25 Pathak SR. Materia medica of homoeopathic medicines. New Delhi: B. Jain Publishers (P) Ltd.; reprinted 2001.

26 Nash EB. Leaders in homoeopathic therapeutics. New Delhi: B. Jain Publishers (P) Ltd.; reprinted 2001.

27 Neatby EA, Stoneham TG. Manual of homoeopathic therapeutics. First Indian edition. New Delhi. Jain Publishers (P) Ltd.;2001.

28 Kent JT. Lectures on Homoeopathic Materia Medica. New Delhi. B. Jain Publisher's (P) Ltd.

29 Farrington EA. Clinical Materia medica. Fourth edition, revised and enlarged by Farrington H. New Delhi. Jain Publishers (P) Ltd; reprint edition 1997.

30 Lippe AV. Keynotes and redline symptoms of the materia medica. First Indian edition. New Delhi: B. Jain Publishers (P) Ltd.;2002.

Medicines	General indications	Characteristic particulars
Graphites	*Chilly patient, takes cold easily; fatty; pale; tendency to skin affections and constipation; lumpy, thick, hard; history of delayed menstruation; skin and glands; dislikes sweets; cautious, indecisive and lazy*	• lll effects of suppressed discharges, better after discharges • Hot flushes especially in the face; with red and flushed face • Other symptoms: menses late, irregular, scanty, pale mixed with small clots and of short duration, thickening and induration of skin • Large, knotty, difficult, stringy, slimy coated stools
Sulphur	*Hot patient; kicks off the cloth at night; dirty, filthy, does not want to be washed; lean, thin, stoop-shouldered, who walk and sit stooping; red orifices; desire sweets; when the best selected remedy fails to improve*	• Flushes of heat to the face and head at climacteric period • The flushes begin somewhere in the heart region, in the chest and feels as if a glow of heat is rising to the face • Irregularity in the menstrual flow, suppressed from the slightest disturbances
Argentum nitricum	*Hot patient; acute or chronic diseases from unusual or long-continued mental exertion; withered, dried-up, old-looking patients; great desire for sweets, aggravation after eating it; inco-ordination, loss of control and want of balance everywhere, mentally and physically; time passes slowly; impulsive, fearful and anxious; Gastrointestinal conditions accompanied by nervousness & anxiety. wants to do things in a hurry; Worse from warmth in any form*	• Metrorrhagia at climaxes; menses irregular, too soon or too late or last for a day only • Menses scanty with dyspnea. Coition painful, followed by bleeding from the vagina • Nervous erythrism at change of life; Colic, with much flatulent distention
Calcarea carbonica	*Chilly patient; takes cold easily; fat, fair, flabby with large head, distended abdomen with red face; pale, weak, easily tired; head sweats profusely while sleeping; sour smelling discharges; longing for fresh air; slow development of*	• Metrorrhagia in climacteric period. Menstrual flow is provoked by over-exertion or by emotion • Voluptuous sensation in the genital parts with flow of blood at a time different from catamenia

Medicines	General indications	Characteristic particulars
	milestones; tendency for lymphatic glandular enlargement; desire for eggs and indigestible things; aversion to meat & milk; fearful, timid, shy, slow and sluggish	
Sanguinaria canadensis	*Right sided complaints; increased thirst, aversion to butter and fat food; desires highly seasoned food; worse from sweets, heat of sun; grumbling child, indolent, disinclined to mental effort*	• Climacteric disorders especially with flushes of heat and foetid, acrid leucorrhoea • Complaints at menopause; metrorrhagia; painful enlargement of breasts • Burning of palms and soles at menopause compelling her to throw off her clothes
Phosphorus	*Chilly patient; tall, fast growing child with tendency to stoop; haemorrhagic tendency; craving for salt, cold foods and drinks; oversensitive to external impressions; nervous and affectionate; anxious especially during thunderstorm*	• Menorrhagia at climacteric period; vicarious menses; copious hemorrhages from uterus; menses too early, flow bright red • Flushes of heat beginning in back or stomach; violent palpitation

ALGORITHM OF TREATMENT PROCESS FOR MENOPAUSE

In most cases, recording a symptom score helps to make the diagnosis and at the same time educates the women.

Clinical diagnosis:

Females in the age group of 45 to 55 years experiencing

- Menstrual irregularity
- Hot flushes and sleep problems
- Mood changes
- Vaginal and bladder problems
- Changes in sexual function
- Loss of bone
- Changing cholesterol levels
- Recurrent urinary tract infections
- Urinary incontinence
- Urethral caruncle
- Lower genital tract atrophy

Assessment of risk factors for major chronic diseases associated with menopause including

- Osteoporosis
- Coronary heart disease
- Deep vein thrombosis
- Diabetes mellitus
- Alzheimer's disease
- Gynaecological cancers, breast cancers, lung cancer, oral cancer and colorectal cancer are to be assessed

Physical examination (including pelvic and breast examination)

Screening and diagnostic tests

- Complete blood count
- Urine examination: routine and culture
- Fasting blood glucose level
- Lipid profile
- Stool for occult blood
- Pap smear
- Ultrasonography including TVS
- Mammogram

In case of abnormality in screening tests or specific indication following investigations are to be done-

- TSH, FSH, Oestradiol
- Tests to assess increased risk of thrombosis
- Coloscopy, Endometrial and cervical biopsy.

Start homoeopathic treatment and Advice for general management

Follow up regularly till the symptoms persists.

Improvement after adequate follow up

NO

YES

Consider for integrative treatment

Continue homoeopathic treatment/ follow up for 6 months with reduced repetition

RED FLAGS

- Worsening of general Condition
- Evidence of complication of chronic diseases associated

Check for complete resolution of symptoms

If resolution is incomplete

Reassess the case and give appropriate homoeopathic medicine

If resolution is complete

Stop treatment

General management

Exercise prescription:

- Moderate to severe aerobic activity or brisk walking for 150 min per week or 30 min /day for 5days in a week
- Strength and stamina building exercises should be added for 2 or 3 times in a week of 20 min per session.
- Meditation and stretching exercises like Yoga should also be included and can be done as a warmup exercise.

Diet & nutrition:

- Calcium and Vit D
- Encourage to take fat free milk, green vegetables, fruits for Vit. E; dark green leafy vegetables for beta carotene; yellow orange-colored vegetables for Vit. E; amla, citrus fruits for Vit C, for protein and ragi, fish, legumes and soya beans for omega 3 fatty acids.

Chapter 14

POLYCYSTIC OVARIAN SYNDROME

POLYCYSTIC OVARIAN SYNDROME

CASE DEFINITION

Polycystic Ovarian Syndrome (PCOS) is defined as a heterogeneous syndrome complex characterized by persistent hyperandrogenic chronic anovulation in the absence of any other cause and is frequently associated with hyperinsulinemia and insulin resistance, resulting in menstrual irregularity, infertility & hirsutism. PCOS is the most common endocrinopathy in women of the reproductive age group.

INCIDENCE/PREVALENCE

- PCOS is a complex metabolic, endocrine, and reproductive disorder affecting approximately 5-10% of the female population in developed countries.[1]
- Prevalence of PCOS in India ranges from 3.7 to 22.5 per cent depending on the population studied and the criteria used for diagnosis.[2]

PATHOGENESIS[3]

The pathogenesis of polycystic ovaries and PCOS is still being elucidated, but the heterogeneity of the presentation of PCOS suggests that a single cause is unlikely. Some genetic studies have identified a link between PCOS and disordered insulin metabolism and indicate that PCOS may be the presentation of a complex genetic trait disorder.

The central issue in the pathogenesis seems to be the inability or insensitivity of the ovaries to respond to the stimulation from the Pituitary gland and hypothalamus, which go on secreting LH and FSH in an inappropriate, insufficient, and untimely manner. This results in increased LH secretion, which is a prominent feature. Other features are ovarian hyperandrogenism, obesity and hyperinsulinaemia. The two later features accentuate the pathogenesis.

DIAGNOSIS

Clinical Presentation[4,5,6]

- Oligomenorrhoea, amenorrhea, abnormal uterine bleeding (All types of menstrual irregularities are more common in obese patients than in lean patients)

---

1 Heidi A. Polycystic ovary syndrome (PCOS) in urban India. The Manlove University of Nevada, Las Vegas.5-1-2011 Accessed from: http://digitalscholarship.unlv.edu/cgi/viewcontent.cgi?article=1937&context=theses dissertations.

2 Ganie MA, Vasudevan V, Wani IA, Baba MS, Arif T, Rashid A. Epidemiology, pathogenesis, genetics & management of polycystic ovary syndrome in India. The Indian journal of medical research. 2019 Oct;150(4):333.-7.

3 Adam Balen. Polycystic ovary syndrome. Textbook of gynaecology by R. Shaw; fourth edition. Churchill Livingstone Elsevier publication. 251-264.

4 Michael T. Sheehan. Review. Polycystic Ovarian Syndrome: Diagnosis and Management. Clinical Medicine & Research. 2004; 2(1): 13-27.

5 The Rotterdam ESHERE/ASRM sponsored PCOS consensus workshop group. Revised 2003 consensus on diagnostic criteria and long-term health risks related to polycystic ovary syndrome (PCOS). Hum Reprod. 2004; 19 (1): 41-7.

6 Azziz R, Carmina E, Dewailly D, Kandarakis ED, Morreale HFE, Futterweit W, et al. The Androgen Excess and PCOS Society criteria for the polycystic ovary syndrome: the complete task force report. AE-PCOS Society report on PCOS phenotype. Fertil Steril;19(2); p.453

- Infertility/ First-trimester miscarriage
- Obesity
- Hirsutism
- Acne
- Virilisation
- Polycystic Ovary in ultrasonography

Other symptoms include:

- Decreased breast size
- Decreased sexual desire
- Achordonosis (skin tags) – tiny flaps of skin seen on eyelids, neck, armpits, and groins
- High blood pressure
- Mood swings
- Depression and anxiety
- Acanthosis nigricans
- Male pattern alopecia

- **Revised 2003[5] Diagnostic criteria for PCOS-**presence of 2 out of 3 of the following symptoms (Rotterdam criteria)

1. Oligo-ovulation or anovulation.
2. Clinical and/or biochemical signs of hyperandrogenism.
3. Polycystic ovaries and exclusion of other etiologies.

- **Androgen Excess Society criteria for diagnosis of PCOS6:** (AES-1990) Diagnostic criteria for PCOS. The Androgen Excess Society (AES) is an international organization dedicated to promoting knowledge, and original clinical and basic research in every aspect of androgen excess disorders.

1. Hyperandrogenism: Hirsutism and /or hyperandrogenemia
2. Ovarian dysfunction: Oligo-anovulation and/or polycystic ovaries
3. Exclusion of other androgen excess or related disorders.

INVESTIGATIONS[4,6,7]

There is no single test diagnostic for PCOS & a number of investigations in unison are helpful to confirm the diagnosis.

7 Central Council for Research in Homoeopathy. Study Protocol Homoeopathy in polycystic ovarian syndrome: A randomized placebo-controlled pilot study. IJRH.2014;8(1):3-8.

Test	Diagnostic Feature
Day 2 serum FSH /LH	Raised LH, decreased or normal FSH LH: FSH > 2-3: 1
S. Testosterone	Raised
S. DHEA	Raised
S. Free Estradiol	Increased
S. Prolactin	Increased
S. Fasting Insulin	Increased
GTT	Impaired
S. Fasting glucose: Insulin ratio	< 4.5
USG	"Necklace" / "string of pearls" appearance
Laparoscopy	"Oyster" ovaries

- ***Clinical Laboratory Evaluations – Explanation of the Table***

➢ **Endocrine profile for PCOS**

1. LH/FSH ratio[5]: - A ratio >2.0 is suggestive of PCOS but is not highly sensitive or specific.
2. Dehydroepiandrosterone-sulfate (DHEAS)[5]: DHEA-S values may be normal or slightly elevated in PCOS. DHEA-S values >800 µg/dL (21.7 µmol/L) warrant consideration of an adrenal tumor.
3. Serum insulin: Increased
4. Glucose insulin ratio[4]: <4.5 in obese, euglycemic, non-Hispanic white adult PCOS patients (<7.0 in adolescents) consistent with insulin resistance
5. Triglycerides: high
6. HDL-cholesterol: low

➢ **Investigations to rule out disorders which mimic the PCOS phenotype**

1. Urine Pregnancy Test in case of married women with amenorrhea
2. Complete Blood Count with ESR
3. Fasting glucose (If >150 mg/dL)
4. Thyroid Function Test – TSH, Free T3, Free T4
5. Serum Prolactins: Mild hyperprolactinemia has been reported in 5% to 30% of patients with PCOS. Prolactin is generally only 50% above the upper limit of normal. Furthermore, hyperprolactinemia is most often transient, with perhaps only 3% to 7% of hyperprolactinemic PCOS patients having persistently elevated prolactin levels.

6. Basal morning 17-OHP
7. Complete Urine Examination

- **Pelvic ultrasonography**

  To be done to confirm the diagnosis of PCOS. The PCOS should have at least one of the following: either 12 or more follicles measuring 2-9 mm in diameter or increased ovarian volume (>10 cm^3). If there is evidence of a dominant follicle (>10 mm) or a corpus luteum, the scan should be repeated during the next cycle. Only one ovary fitting this definition or a single occurrence of one of the above criteria is sufficient to define PCOS.

DIFFERENTIAL DIAGNOSIS AND LABORATORY TEST[5]

Diagnosis	Laboratory test
Pregnancy	Pregnancy test
Hypothyroidism	Thyroid-stimulating hormone (TSH)
Hyperprolactinemia	Prolactin
Late-onset congenital adrenal hyperplasia (CAH)	17-Hydroxyprogesterone
Ovarian tumour	Total testosterone
Hyperthecosis	Total testosterone
Adrenal tumour	Dehydroepiandrosterone-sulfate (DHEA)-S
Cushing's syndrome	24-hour urine-free cortisol

EVALUATION AND ASSESSMENT

Different scales are used for the assessment of different features of PCOS. Some of the scales require permission for use, and some are free for use.

- ***Polycystic Ovary Syndrome Questionnaire (PCOSQ)[8]:*** The PCOSQ is a reliable instrument for measuring the health-related quality of life (HRQoL) of women with polycystic ovary syndrome.
- ***Global Acne Severity Scale[9]:*** It is an acceptable global assessment scale.
- ***Hirsutism[10]:*** Quantifying the extent of male-pattern terminal hair growth is critical for a thorough evaluation of women with potential androgen excess. The use of modified Ferriman-Gallwey visual scoring method has been used extensively for this purpose.

COMPLICATIONS[3]

- Ischaemic heart disease
- Insulin resistance
- Homocysteine

8 Cronin, L. Guyatt, G. Griffith, L, Wong, E, Azziz, R, Futterweit, W, Cook D, Dunaif A. Development of a Health-Related Quality-of-Life Questionnaire (PCOSQ) for Women with Polycystic Ovary Syndrome (PCOS)JCEM 1998 83: 1976-87.

9 Dréno B, Poli F, Pawin H, Beylot C, Faure M, Chivot M, et al. Development and evaluation of a Global Acne Severity Scale (GEA Scale) suitable for France and Europe.J Eur Acad Dermatol Venereol. 2011 Jan;25(1):43-8.

10 Androgen Excess and PCOS society. [cited 04 Jul 2014]. Available at: http://www.ae-society.org/tools.

- Endometrial cancer
- Endometrial hyperplasia
- Breast cancer
- Ovarian cancer

RED FLAGS

- Amenorrhea of more than three months/irregular menses (exclude pregnancy in case of amenorrhea)
- Hirsutism/unwanted hair growth
- Weight gain during puberty

MANAGEMENT

General management

PCOS is a complex metabolic, endocrine, and reproductive disorder. The therapeutic goal is to establish normal ovulatory cycles/ menstrual regularity with ultrasonological improvement of polycystic ovaries and to control hyperandrogenism. Non-pharmacological modalities for managing PCOS are as follows:

Counselling to Patients and Family

Information regarding avoidable risk factors needs to be told to the patients and their families along with guidance regarding lifestyle modifications i.e., diet and physical activity. Lifestyle modification should be the first treatment and is effective in reducing the signs and symptoms of PCOS.

- Regular brisk walking for 45 min daily for a minimum of five days a week.
- Nutritionally adequate, low-fat (approximately 30% of energy, saturated fat approximately 10%), moderate-protein (approximately 15%) and high-carbohydrate dietary intake (approximately 55%), with increased fibre-rich wholegrain bread, cereals, fruits, and vegetables.
- Avoid junk food.
- Weight loss exercise is advisable in obese patients.

Management of Depression and Anxiety

As said in the section on clinical presentation, depression, mood swings and anxiety are commonly found in patients with PCOS. In our country, there are many socio-religious-cultural and economic factors that influence the individual response to the disease and how society at large accepts these patients. A physician needs to keep all these factors in mind when he interacts with these patients in whom low mood and anxiety are commonly found.

Homoeopathic management

There is no single rubric covering this disorder in the homoeopathic repertory. As per the principles of Homoeopathy, well indicated constitutional remedy based on the totality of symptoms can work

well. However, when the polychrest or constitutional remedies are not indicated or fail to relieve in the case, then, indigenous, rare, and other medicines could be considered. For example, emmenagogues like *Pulsatilla, Gossypium, Ashoka* etc. may be required at times in cases of prolonged amenorrhoea. Homoeopathic literature[11,12,13] and research[14-25] could identify medicines which are prescribed and effective in this condition or with symptom similarity.

The indications of commonly used medicines are given below:

Medicines	General indications	Characteristic particulars
Pulsatilla nigricans	*Hot patient; marked changeability of symptoms; aversion to fatty foods, warm foods and drinks, dislikes butter; thirstless with great dryness of the mouth; tongue coated yellow or whitish; worse towards evening and in a warm room, better in the open air, by slow, gentle motion and cold applications; desire for company, mild, gentle, affectionate, yielding, weeping disposition*	• Menses menstrual flow changeable; tardy or premature, of too short or too long duration, or entirely suppressed • History of menses delayed at puberty • Marked dysmenorrhea at the beginning of puberty
Apis mellifica	*Hot patient; oedematous, bag-like puffy swelling under the eyes: glands enlarged and indurated; thirstlessness; worse afternoon:*	• Ovarian cysts, especially on the right side, with stinging pains • Amenorrhea or menorrhagia of females; inflammation,

11 Schroyens F. Synthesis Repertory 9.1. New Delhi: B Jain Publishers (Pvt. Ltd.); 2002.

12 Boericke W. Boericke's new manual of Homoeopathic Materia Medica. 3rd revised and augmented edition. B. Jain Publishers: New Delhi.

13 Gimeno ML Q. Homœopathic treatment of ovarian cysts: A series of 40 cases. British Homoeopathic journal. 1991;80(3): 143-148.

14 Sanchez-Resendiz J., Guzman-Gomez F. Polycystic Ovary Syndrome. Boletin Mexicano de Homeopatica. 1997; 30: 11-15.

15 Gupta G. Polycystic Ovarian Disease (PCOD). The Homoeopathic Heritage. 2009; 34(5): 7-11.

16 Cardigno P. Homeopathy for the treatment of menstrual irregularities: a case series. Homeopathy. 2009; 98(2): 97-106.

17 Parveen S, Das S. Homeopathic Treatment in Patients with Polycystic Ovarian Syndrome: A Case Series. Homeopathy. 2021 Aug;110(3):186-193. doi: 10.1055/s-0041-1725039; Epub 2021 May 12. PMID: 33979843.

18 Lamba P, Sharma D, Sinnarkar VV. Polycystic Ovarian Syndrome Treated with Individualized Homeopathy: A Case Report. Altern Ther Health Med. 2022 Sep;28(6):60-64. PMID: 34653021.

19 Malvekar PA, Nadgauda S S, Jadhav A B. A Clinical Study to See the Effect of Homoeopathic Medicines in Polycystic Ovarian Syndrome of Reproductive Age Group between 12-45 Years. International Journal of Health Sciences and Research. 2020;10; (3) : 43-47.

20 Sinnarkar V, Alekar A, Mahajan J. Efficacy of Cyclical Prescription in Homoeopathic Management of Polycystic Ovary Disease: A Case Report. Altern Ther Health Med. 2021 Jul 2:AT6799.

21 Lamba CD, Oberai P, Manchanda RK, Rath P, Bindu PH, Padmanabhan M. Evaluation of homoeopathic treatment in polycystic ovary syndrome: A single-blind, randomized, placebo-controlled pilot study. Indian J Res Homoeopathy. 2018; 12:35-45.

22 Gupta G, Gupta N, Singh S, Roja V, Dewan D. Homoeopathic treatment of women with polycystic ovarian syndrome: A prospective observational study. Indian J Res Homoeopathy. 2021; 15:12-23.

23 Rath P. Management of PCOS through Homoeopathy-A case report. Indian J Res Homoeopathy. 2018; 12:95-100.

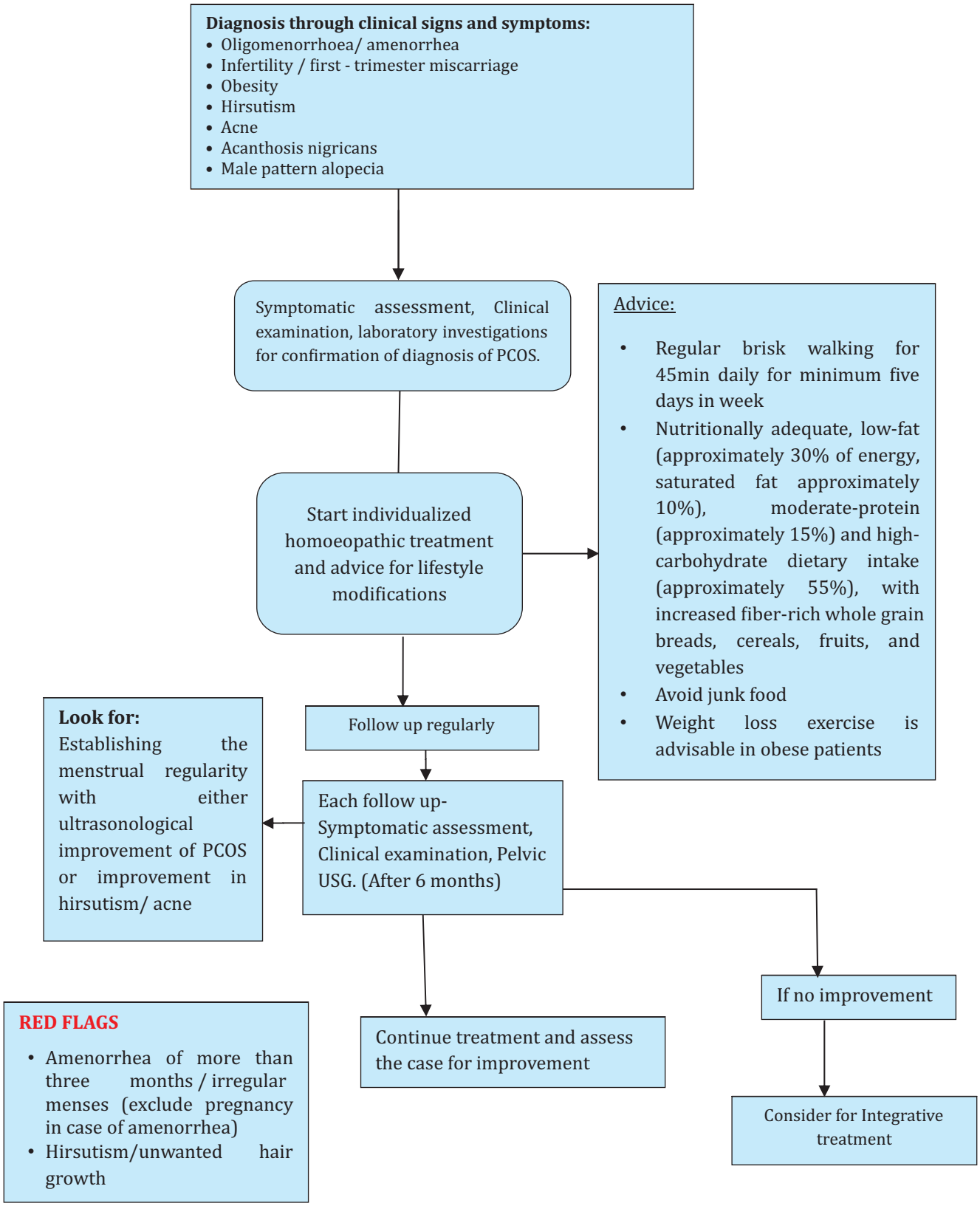
24 Arora G, Goyal A. Polycystic ovarian syndrome with obsessive-compulsive disorder treated with homoeopathy: A case report. Indian J Res Homoeopathy. 2022;16(2):163-170.

25 Shinde V. Polycystic ovarian syndrome with endometrial hyperplasia and uterine fibroids treated with homoeopathy: A case report. Indian J Res Homoeopathy. 2022;16(3):231-238.

Medicines	General indications	Characteristic particulars
	warm and heated rooms are intolerable; better from cold application, constant whining, nothing seems to satisfy, irritable, sensitive to touch, cannot bear to be left alone, restlessness and fidgety, awkward – drop things easily from hands, hard to please	induration, swelling, and dropsy of the ovaries (right) • Great tenderness over the abdomen and uterine region
Natrum muriaticum	*Hot patient, great liability to take cold, craving for salt; Averse to bread, anything slimy like oysters, fats; unquenchable thirst. Melancholy; sadness induces a constant recurrence of unpleasant recollections and much weeping; consolation aggravates. Ill effects of grief, fright, anger, etc. Oversensitive to all sorts of influences. Suitable to patients having shining face, as if greasy*	• Difficulty in the appearance of first menses; menses irregular, usually profuse; headache before, during, and after menses • Before menses, moroseness, and irritability; at commencement of menses, sadness; during menses, cramps in the abdomen. Spitting blood at menstrual nisus
Calcarea carbonica	*Chilly patient; takes cold easily; fat, fair, flabby with a large head, distended abdomen with a red face; pale, weak, easily tired; head sweats profusely while sleeping; sour-smelling discharges; longing for fresh air; slow development of milestones; the tendency for lymphatic glandular enlargement; desire for eggs and indigestible things; aversion to meat & milk; fearful, timid, shy, slow, and sluggish*	• Menses too early, too profuse, too long-lasting • Pre - menstrual syndrome with anxiety, headache, vertigo, colic, leucorrhoea and sore breast • Cutting pains in the uterus during menstruation • The least excitement causes the return of menstrual flow • Burning and itching of parts before and after menstruation; in little girls
Sulphur	*Hot patient: dirty, filthy, lean, thin, stoop-shouldered who walks and sits stooping; red lips, warm and moist palms; desires sweet; nervous, quick-tempered*	• Menses: too early, profuse, protracted or too late, short, scanty, and difficult; thick, black, acrid, making parts sore • Menses preceded by headache • Before menses: headache, itching in the parts; spasmodic colic; inquietude; cough; toothache; pyrosis; epistaxis; leucorrhea, and asthmatic sufferings

Medicines	General indications	Characteristic particulars
Ignatia amara	*Chilly patient; periodicity of symptoms; erratic and contradictory symptoms; hysterical, nervous, sensitive, excitable, mild; quick to perceive and rapid in execution; moody; involuntary sighing and sobbing; apprehension*	• Menstrual flow is black, too early, too profuse, or scanty • During menses, great languor, with spasmodic pains in the stomach and abdomen. Suppression from grief • The dysmenorrhœa has labour-like bearing - down in hypogastrium, better by pressure; if profuse, clotted
Sepia officinalis	*Chilly patient; tall, thinly built with yellow saddle across the upper part of cheeks and nose, big belly; dry, flabby skin; predisposed to take cold at the change of weather; desire for sour food which aggravates; cheerful, active when well but indifferent and quarrelsome when sick; self-absorbed, sad, weeping, and indolent*	• Menses too late, scanty, irregular; early and profuse; sharp clutching pains • Violent stitches upward in the vagina, from the uterus to the umbilicus. Colic before menses • During menses: irritability, melancholy, toothache, headache, nosebleed, painful weariness in limbs, or spasmodic colic and pressure towards the parts • Must cross her limbs to prevent protrusion of the parts. Dull, heavy pain in ovaries
Kalium bromatum	*Stocky person with a tendency to obesity; nervous, restless, cannot sit still, fidgety hands, hands and fingers in constant motion; stammering, forgetful*	• Ovarian neuralgia with great nervous uneasiness; pain, swelling, tenderness of left ovary • Cystic tumours of ovaries; ovarian neuralgia from ungratified sexual desire • Before menses: headache • During menses: epileptic spasms, nymphomania, itching, burning, and excitement in the vulva, pudenda, and clitoris • After menses: headache, insomnia, and heat in genitals. Epileptic attacks at or near menstrual periods • Scanty menstruation in fleshy women

ALGORITHM OF TREATMENT PROCESS FOR POLYCYSTIC OVARIAN SYNDROME


Diagnosis through clinical signs and symptoms:
• Oligomenorrhoea/ amenorrhea
• Infertility / first - trimester miscarriage
• Obesity
• Hirsutism
• Acne
• Acanthosis nigricans
• Male pattern alopecia
Symptomatic assessment, Clinical examination, laboratory investigations for confirmation of diagnosis of PCOS.
Start individualized homoeopathic treatment and advice for lifestyle modifications
Advice:
• Regular brisk walking for 45min daily for minimum five days in week
• Nutritionally adequate, low-fat (approximately 30% of energy, saturated fat approximately 10%), moderate-protein (approximately 15%) and high-carbohydrate dietary intake (approximately 55%), with increased fiber-rich whole grain breads, cereals, fruits, and vegetables
• Avoid junk food
• Weight loss exercise is advisable in obese patients
Follow up regularly
Look for:
Establishing the menstrual regularity with either ultrasonological improvement of PCOS or improvement in hirsutism/ acne
Each follow up- Symptomatic assessment, Clinical examination, Pelvic USG. (After 6 months)
If no improvement
Continue treatment and assess the case for improvement
Consider for Integrative treatment
RED FLAGS
• Amenorrhea of more than three months / irregular menses (exclude pregnancy in case of amenorrhea)
• Hirsutism/unwanted hair growth

Chapter 15

PSORIASIS

PSORIASIS

CASE DEFINITION

Psoriasis is a common, chronic, inflammatory, multisystem disease with predominantly skin and joint manifestations.[1] It is characterized by well defined erythematous scaly plaques which become silvery on attempt to scrape.[2]

INCIDENCE/PREVALENCE[3]

In India the prevalence of psoriasis varies from 0.44 to 2.8%, it is twice more common in males compared to females, and most of the patients are in their third or fourth decade at the time of presentation.

AETIOPATHOGENESIS

The exact cause of psoriasis is not known. It is considered to be inherited as an autosomal dominant condition with irregular penetrance. It is known to be an autoimmune process with genetic predisposition and is found to be associated with other autoimmune illnesses like sero-negative arthropathies. The basic pathology of psoriasis shows drastic reduction in the time taken for transfer of epidermal cells from basal cell layer to outer surface of skin from the normal one month (normal) to 3-5 days resulting in the formation of immature epidermal cells which are shed as scales.

Emotional stresses are known to be associated with triggering or aggravating the psoriasis, however their exact mechanisms are still not established.

TYPES [1,2]

Classification is based on phenotyping. However, clinical findings in individual patients frequently overlap in more than one category.

1. Plaque type

Plaque psoriasis is the most common form, affecting approximately 80% to 90% of patients. It manifests as well-defined, sharply demarcated, erythematous plaques varying in size from 1 cm to several centimeters.

Patients may have only a few plaques to numerous lesions covering almost the entire body surface. The plaques are irregular, round to oval in shape, and most often located on the scalp, trunk, buttocks, and limbs, with a predilection

1 Menter A, Gottlieb CA, Feldman SR, Voorhees ASV, Leonardi CL, Gordon KB, et al. Guidelines of care for the management of psoriasis and psoriatic arthritis. J Am Acad Dermatol.2008; 58(5): 826-50.

2 Gupta R, Manchanda RK. Textbook of Dermatology for Homoeopaths. 3rd Edition. New Delhi: B Jain Publishers. 2009: Pg 186-190.

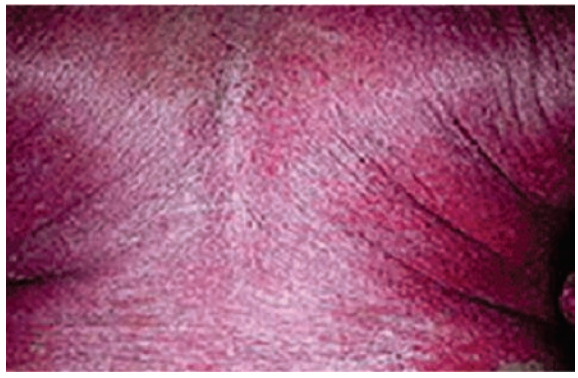
3 Dogra S, Yadav S. Psoriasis in India: Prevalence and pattern. Indian J Dermatol Venereol Leprol [serial online] 2010 [cited 2015 Mar 20];76: 595-601. Available from: http://www.ijdvl.com/text.asp?2010/76/6/595/72443

for extensor surfaces such as the elbows and knees. Smaller plaques or papules may coalesce into larger lesions, especially on the legs and trunk. Painful fissuring within plaques can occur when lesions are present over joint lines or on the palms and soles.

2. Inverse

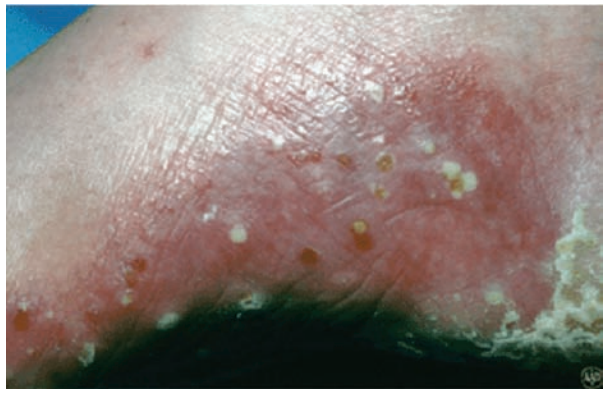
Inverse psoriasis is characterized by lesions in the skin folds. Because of the moist nature of these areas, the lesions tend to be erythematous plaques with minimal scale. Common locations include the axillary, genital, perineal, inter gluteal, and inframammary areas.

3. Erythrodermic



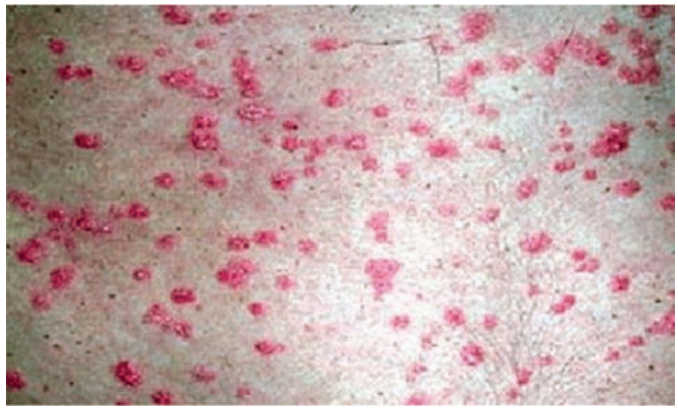
Erythrodermic psoriasis can develop gradually from chronic plaque disease or acutely with little preceding psoriasis. Generalized erythema covering nearly the entire body surface with varying degrees of scaling is seen. Altered thermoregulatory properties of erythrodermic skin may lead to chills and hypothermia, and fluid loss may lead to dehydration. Fever and malaise are common.

4. Pustular



Pustular psoriasis maybe generalized or localized. The acute generalized variety (termed the ''von Zumbusch variant'') is an uncommon, severe form of psoriasis accompanied by fever and toxicity and consists of widespread pustules on an erythematous background. Cutaneous lesions characteristic of psoriasis vulgaris may be present before, during, or after an acute pustular episode. There is also a localized pustular variant of psoriasis involving the palms and soles, with or without evidence of classic plaque-type disease.

5. Guttate



Guttate psoriasis is characterized by dew-drop like, 1- to 10-mm, salmon-pink papules, usually with a fine scale. There is history of upper respiratory infection with group A beta-hemolytic streptococci often preceding guttate psoriasis, especially in younger patients, by 2 to 3 weeks. This sudden appearance of papular lesions may be either the first manifestation of psoriasis in a previously unaffected individual or an acute exacerbation of long-standing plaque psoriasis.

Based on area of affection psoriasis is reflected as:

Scalp psoriasis[4]

Psoriatic lesions present on scalp, margin of scalp, occasionally extending to back of neck or behind the ears. It may present as:

- Reddish patches on the scalp varying from barely noticeable to very noticeable, thick, and inflamed patches
- Dandruff-like flaking and silvery-white scale
- Dry scalp, which may be so dry that the skin cracks and bleeds
- Itching is one of the most common symptom
- Bleeding, because lesions can be very itchy
- Burning sensation or soreness in the scalp
- Temporary hair loss - Scratching the scalp or using force to remove the scale can cause hair loss. Once the scalp psoriasis clears, hair usually regrows

Nail Disease (Psoriatic Onychodystrophy)

Nail psoriasis can occur in all psoriasis subtypes. Fingernails are involved in approximately 50% of all patients who are psoriatic and toenails in 35% of patients.[1] Characteristic changes in the nail include multiple pin point pits on nail plates, separation of nail plate from nail bed (called onycholysis, presenting as an area of yellowish discolouration), brownish discolouration, thickening and irregularity of nail plate called onychodystrophy.[2]

4 American Academy of Dermatology. Psoriasis: Signs and symptoms US; 2015; [cited 13th Sept 2015] Available from: https://www.aad.org/public/diseases/psoriasis/what/symptoms

Psoriatic Arthritis

About 5% of people with psoriasis will develop arthritis, which is seronegative oligoarthritis[5] commonly involving distal interphalangeal joints.[2] In most cases, psoriasis comes before the arthritis. Most of the time, people with psoriatic arthritis have the skin and nail changes of psoriasis. Often, the skin gets worse at the same time as the arthritis. In some people the disease may be severe and affect many joints, including the spine. Symptoms in the spine include stiffness, burning, and pain. They most often occur in the lower spine and sacrum.[6]

DIAGNOSIS

The patients may be often asymptomatic however mostly they present with severe itching[2]. The major manifestations are disfiguring, scaling, and erythematous plaques that may be painful or often severely pruritic and may cause significant quality of life issues. Psoriatic plaques typically have a dry, thin, silvery white scales, often modified by regional anatomic differences, and tend to be symmetrically distributed over the body.[1] They may tend to worsen during winters and improve or even clear in summers. Spontaneous remission & relapses at variable intervals is frequent.[2]

Clinical evaluation[7]

For people with any type of psoriasis assess:

- Disease severity
- The impact of disease on physical, psychological and social wellbeing
- Whether they have psoriatic arthritis
- Presence of comorbidities

Assess the severity and impact of any type of psoriasis:

- At first presentation
- Before referral for specialist advice and at each referral point in the treatment pathway to evaluate the usefulness of interventions

When assessing the disease severity, record:

- Physician's Global Assessment
- Patient's assessment of current disease severity

5 Psoriatic Arthritis: Practice essentials 2014; New York: 2014 [cited 25th September 2015] Available from: http://emedicine.medscape.com/article/2196539-overview

6 Medical encyclopedia on Psoriatic arthritis; U.S. National library of medicine [Updated 4/18/2014, cited 25th September 2015] Available at http://www.nlm.nih.gov/medlineplus/ency/article/000413.htm

7 NHS. Psoriasis: The assessment and management of psoriasis. NICE clinical guideline 153. Issued: October 2012.

- Body surface area (BSA) affected
- Any involvement of nails, high-impact and difficult-to-treat sites (for example, the face, scalp, palms, soles, flexures and genitals)
- Any systemic upset such as fever and malaise

Physical examination[2]

Grattage test: when an attempt is made to scrap the psoriasis plaque, it becomes silvery. On further scraping a thin membrane of skin comes out resulting into multiple pin point bleeding spots. This is known as Auspitz sign and the whole process is called grattage test.

INVESTIGATIONS

In case where there is diagnostic uncertainty, skin biopsy is conducted to confirm the diagnosis of psoriasis.

Co-morbidities[8]

- Psoriasis may be an independent risk factor for myocardial infarction with the greatest relative risk for young patients with severe disease.
- Several studies have shown an association between severity of psoriasis and obesity.
- Patients with psoriasis have an increased risk of metabolic syndrome and its individual components.
- Psoriasis and psoriatic arthritis affect all aspects of quality of life with potentially profound psychosocial implications. Long term psychological distress can lead to depression and anxiety. Psoriasis may be associated with increased smoking and alcohol consumption.

RED FLAGS

- People with generalized pustular psoriasis or erythroderma should be referred immediately.
- Psoriasis is severe or extensive.
- Psoriasis has a major impact on a person's physical, psychological or social wellbeing.

EVALUATION AND ASSESSMENT

- Psoriasis Area and Severity Index [9]
- Nail Psoriasis Severity Index [10]

---

8 Scottish Intercollegiate Guidelines Network (SIGN). Diagnosis and management of psoriasis and psoriatic arthritis in adults. Edinburgh: SIGN; 2010. (SIGN publication no. 121). [cited 20 March 2015]. Available from: https://www.sign.ac.uk/assets/sign121.pdf

9 Psoriasis area and severity Index (PASI) Worksheet. British association of Dermatologists. [cited 24 nov. 2015] Available from: http://www.bad.org.uk/shared/get-file.ashx?id=1654&itemtype=document

10 Rich P, Scher RK. Nail Psoriasis Severity Index: a useful tool for evaluation of nail psoriasis. Journal of the American Academy of Dermatology. 2003; 49: 206 –12.

- Dermatology Life Quality Index (DLQI)[11] for adults or Children's Dermatology Life Quality Index (CDLQI)[12] for children and young people

MANAGEMENT

General management

Patients should be encouraged to expose to sunlight and avoid trauma during active phase.[2] Discuss the condition and its treatment with the patient in detail. Information giving is an integral part of any consultation.[7]

- Explain to patients what psoriasis is and how it is diagnosed.
- Explain that psoriasis is not infectious and discuss the patient's family history.
- Explain the unpredictable but recurring nature of psoriasis and that flare-ups can occur.
- Emphasize to patients that psoriasis is a long term, relapsing condition but can be managed with appropriate treatments.
- Advise patients that referral to dermatology may be necessary when the diagnosis is unclear or the disease is extensive.
- Emphasize the importance of reporting joint pain, swelling or stiffness for further investigation.
- If joint pain is present, explain to patients what psoriatic arthritis is.
- Discuss the following quality of life issues whilst reassuring patients that these issues may not be pertinent in every case.
  - skin pain and itch
  - employment issues and managing treatments while at work
  - possible stigma and impact on daily activities
  - family life and relationships (including sexual relationships)
  - emotional issues such as depression, anxiety and stress
- Make patients aware of the increased risk of co-morbidities, e.g., cardiovascular disease and the importance of regular check ups.
- Discuss the following lifestyle factors in relation to co-morbidities of psoriasis.
  - smoking and how to stop smoking
  - blood pressure control
  - weight control
  - alcohol advice

11 Dermatology Quality of Life Index (DLQI). Department of Dermatology U.K. [cited 23rd September 2015] Available from: http://www.dermatology.org.uk/quality/dlqi/quality-dlqi.html

12 Children's Dermatology Life Quality Index (CDLQI). Department of Dermatology U.K. [cited 23rd September 2015] Available from: http://www.dermatology.org.uk/quality/cdlqi/quality-cdlqi.html

- Emphasize to patients that the aim of treatment is to reduce plaque size, thickness and extent of scaling and thereby improve quality of life.
- Discuss the various treatment choices and ensure the patient is involved in the decision making process. Explain the risks, side effects and benefits of treatments to help patients make an informed choice.
- Discuss requirements for monitoring and assessment of ongoing disease activity.
- Encourage patients to identify trigger factors if possible and develop coping strategies for flare-ups.

Homoeopathic management

Role of complementary and alternative therapies (CAM) in treatment of skin conditions (like Psoriasis) is increasing amongst the masses.[13,14] Research studies and case reports in the past throw light upon the beneficial role of Homoeopathy.[15,16,17] Psoriasis is a multi-systemic illness with varying locations, varying expressions, varying state and stage of pathology with different rates of progress either showing predominant skin symptoms or symptoms pertaining to nails, joints or other systems. Apart from prescribing constitutional based on totality of symptoms, certain specific remedies which are commonly prescribed are as follows: ***Arsenicum iodatum:*** Skin is dry, scaly, itching. marked exfoliation, in large scales with debilitating night sweats. ***Kali arsenicosum:*** Intolerable itching, worse on undressing, warmth, change of weather. Dry scaly eruptions. ***Kali bromatum:*** Eruptions appear in spring and are worse in summers. Dry itchy eruptions, cracked skin of hands and feet. Emaciation, white coated tongue. ***Hepar sulph.:*** Useful in pustular psoriasis. ***Hydrocotyle:*** Psoriasis gyrate, on trunk and extremities, palms and soles, circumscribed red scaly lesions, with severe itching or pricking worse at night and after scratching. ***Castor equi:*** Thickening of skin, psoriasis of tongue. ***Corallium rubrum:*** Psoriasis of palms and soles. ***Cuprum aceticum:*** Chronic psoriasis without itching, generalized psoriasis and psoriasis in spots.[2]

13 Ben-Arye E, Ziv M, Frenkel M, Lavi I, Rosenman D. Complementary medicine and psoriasis: linking the patient's outlook with evidence-based medicine. Dermatology. 2003;207 (3):302-7.

14 Smolle J. Homeopathy in dermatology. Dermatol Ther. 2003;16(2):93-7.

15 Witt CM, Lüdtke R, Willich SN Homeopathic treatment of patients with psoriasis--a prospective observational study with 2 years follow-up. J Eur Acad Dermatol Venereol. 2009; 23 (5):538-43.

16 Mahesh S, Shah V, Mallappa M, Vithoulkas G. Psoriasis cases of same diagnosis but different phenotypes-Management through individualized homeopathic therapy. Clin Case Rep. 2019;7(8):1499-1507.

17 Taneja D, Sadhukhan M, Rath P, Sarangi MR, Mittal R, Prusty AK, et al. Open-Label Study to Evaluate the Response to Homeopathic Treatment of Psoriasis. OBM Integrative and Complementary Medicine. 2022; 7(3): 044.

Indications of some important remedies are given below:[18,19]

Medicines	General indications	Characteristic particulars
Arsenic album	*Chilly patient; rapid disproportionate prostration; burning pains better by heat (except headache); cadaveric odour of discharges and body; anxiety, anguish, fear for death and restlessness*	• Skin itching, burning, dry, rough, and scaly. The lesion may also have oedema, redness, excoriations, crusting • Itching worse: wet weather, after midnight; at seashore; better: from heat
Borax	*Poorly nourished; aphthous ulceration of mucous membranes; dread of downward motion in nearly all complaints; nervous, frightened, sensitive to sudden noises, awakes suddenly dreaming and grasping sides of bed without apparent cause*	• Psoriasis with unhealthy skin with tendency for easy suppuration • The hair is untidy, dirty, tangled, split, sticks together at tips and cannot be combed smoothly • The eyelashes are loaded with dry gummy exudation agglutinated in morning and turns inwards
Calcarea carbonica	*Chilly patient; takes cold easily; fat, fair, flabby children with large head, distended abdomen with red face; weak, easily tired; head sweats profusely while sleeping; tendency to lymphatic glandular enlargement; sour smelling discharges; longing for fresh air; desire for eggs and indigestible things, aversion to meat and milk; fearful, shy, timid, slow and sluggish*	• Skin is unhealthy readily ulcerating; flaccid • Chaps, or rhagades, especially in those who work in water • Unhealthy, ulcerative skin; even small wounds suppurate
Fluoric acidum	*Young persons with great ability to exercise without fatigue and is sensitive to extremes of temperature, sour, offensive perspiration*	• Itching especially of the orifices and in spots, worse warmth

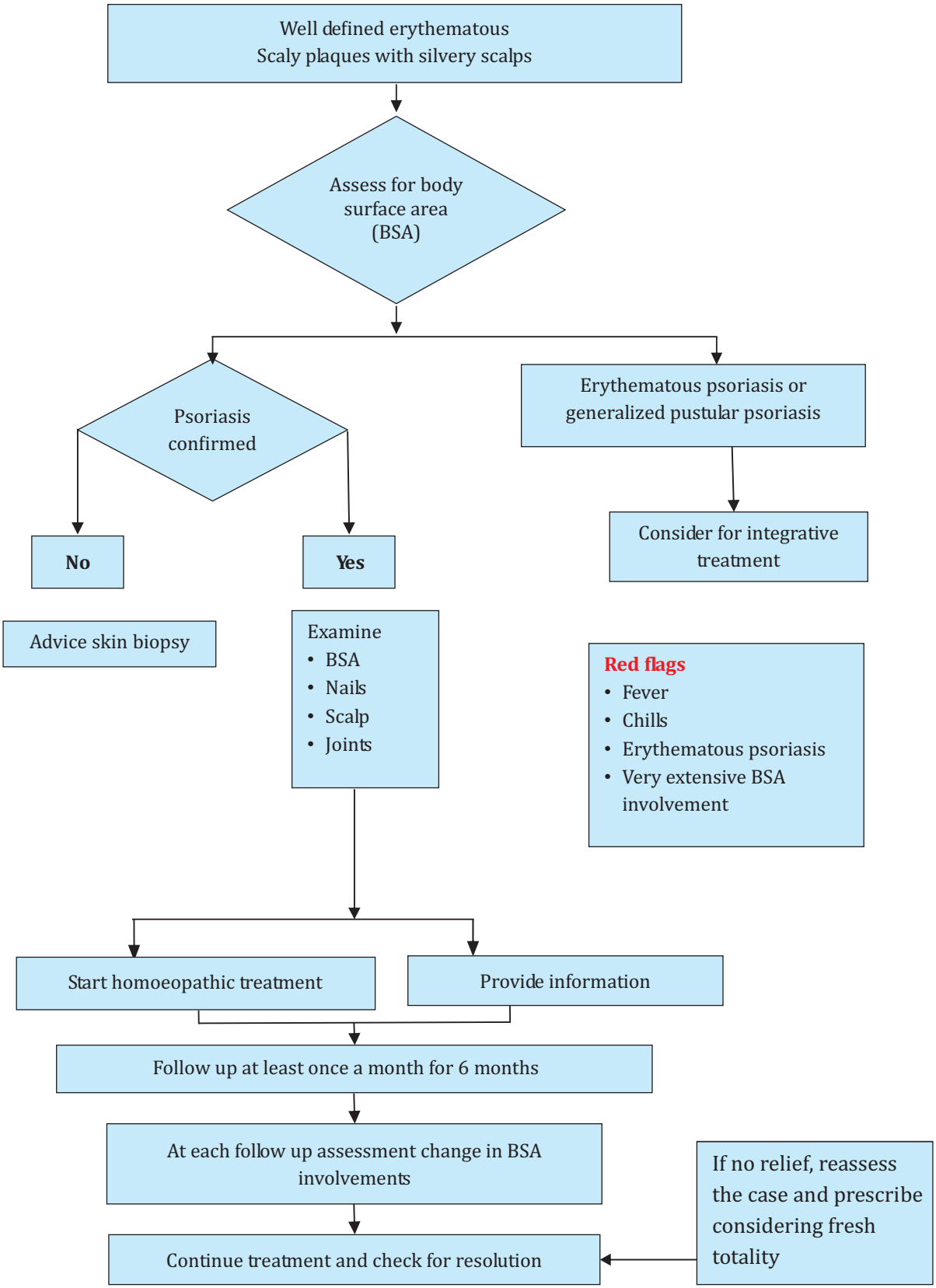
18 Allen HC. Allen's Keynotes- Rearranged and classified with leading remedies of the materia medica and bowel nosodes. 10th Reprint edition. Jan 2006.

19 Boericke W. Boericke's New Manual of Homoeopathic Materia Medica with Repertory: Third Revised & Augmented Edition based on Ninth Edition. New Delhi: B. Jain Publishers; 2010.

Medicines	General indications	Characteristic particulars
Graphites	*Chilly patient, takes cold easily; fatty; pale; tendency to skin affections and constipation; lumpy, thick, hard skin and glands; dislikes sweets; cautious, indecisive and lazy*	• Unhealthy skin, eruptions on ears, between fingers, toes or other skin folds. Cracks, fissures at tips of fingers, nipples, labial commissures, anus and between toes • Rough, hard persistent dryness of portions of skin • Worse: warmth, at night
Lycopodium clavatum	*Intellectually keen but physically weak; upper part of body emaciated, lower part semidropsical; complexion pale, dirty, sallow with deep furrows; looks old; recurrent respiratory and gastro - intestinal affections; tendency for flatulent dyspepsia; worse from 4 to 8 pm; right sided complaints or symptoms shifts from right to left; desire for warm foods and drinks, sweet; dominating, cranky, lack of self-confidence, precocious*	• Skin with thickening, indurations, brown spots on face, fissures, pre-mature graying of hair • Violent itching worse on warm application
Mercurius solubilis	*Sensitive to changes of temperature; lax musculature; profuse offensive perspiration; tongue flabby with imprint of teeth, increased salivation; worse at night, in wet damp weather; fearful, shy, hurried, violent, impulsive, weak memory, nervous, irresolute*	• Itching or burning pains worse at night. Lesions with suppurations
Natrum muraiaticum	*Hot patient; poorly nourished; great emaciation (marked on neck), losing flesh while eating well; craving for salt; aversion to bread and fatty things; constipated; increased thirst; mapped tongue with red insular patches; melancholic, sad, plays alone, irritable, cross, cries when spoken to, awkward, hasty, drops things from nervous weakness; disposition to weep without cause, consolation aggravates*	• Greasy, oily, especially on hairy parts • Dry eruptions on margin of hairy scalps • Itch and burn, crusty eruptions in bends of limbs, margin of scalp behind ears • *Worse:* at the sea shore and sunlight • *Better:* in open air

Medicines	General indications	Characteristic particulars
Petroleum	*Chilly patient; lean, emaciated subjects; symptoms appear and disappear rapidly; ailments during winter; foul smelling sweat especially on hands and feet; worse before and during thunderstorm; easily offended by trifles*	• Skin dry, constricted, very sensitive, rough, cracked, leathery. Psoriasis of hands. Skin symptoms worse in winters. Itching worse at night
Phosphorus	*Chilly patient; tall fast growing child with tendency to stoop; hemorrhagic tendency; craving for salt, cold food and drink; oversensitive to external impressions; nervous and affectionate, anxious especially during thunderstorm*	• Dandruff, hair fall in bunches, formication, itching, burning, ecchymosis, scaly lesions over various parts of body, including eye brows • Brown spots on face. Skin is fair and delicate
Sepia officinalis	*Chilly patient; thin built with yellow saddle across the upper part of the cheeks and nose; big belly; dry flabby skin; predisposed to take cold at the change of weather; desire for sour food which aggravates; cheerful, active when well but become indifferent and quarrelsome when sick, self absorbed, sad weeping and indolent*	• Ring shaped lesions on upper part of body, appearing in spring • Itching worse on elbows and knee, hyper-pigmented spots over face • *Worse:* after washing, exposure to cold air • *Better:* from warmth of bed, hot application and violent exercise
Staphysagaria	*Sickly; tired; sensitive subjects; bottled up emotions always angry, easily offended, apathetic indifferent*	• Itching changing location after scratching, thick scabs
Sulphur	*Hot patient; dirty, filthy, lean, thin, stoop shouldered children who walk and sit stooping; red lips, warm and moist palms; desires sweet; nervous, quick tempered*	• Dirty, filthy skin, excessive burning all over, marked itching, wants to scratch, burning after scratching • Eruptions dry, scaly, pustular, cracks and excoriations in skin folds. Relapsing complaints • *Worse:* at rest, when standing, warmth in bed, washing, bathing, in morning, 11 am, night, from alcoholic stimulants, periodically • *Better:* dry, warm weather

ALGORITHM OF TREATMENT PROCESS FOR PSORIASIS



Chapter 16

RHINITIS

RHINITIS

CASE DEFINITION

Rhinitis is the inflammation of the mucous membrane lining of the nose, characterized by nasal congestion, rhinorrhea, sneezing, itching of the nose, and postnasal drainage.[1]

INCIDENCE/PREVALENCE

- Coryza can occur throughout the year.
- The median worldwide prevalences of unspecified rhinitis, Allergic Rhinitis and Non-Allergic Rhinitis were 29.4%, 18.1%, and 12.0%. A geographical variability was observed in the prevalences of subtypes of rhinitis.[2]
- Young children have an average of six to seven colds per year but 10-15% of children can have upto12 infections per year or even more.
- In India, 1 out of every 6th person has allergic rhinitis.[3]
- Symptoms of a cold usually resolve after about one week, but can last up to 14 days, with cough and nasal stuffiness lasting longer than the other symptoms.

AETIOPATHOGENESIS

Rhinitis especially acute may be caused by various factors like:

- **Viral:** Adeno, Picorna and its sub-groups such as rhinovirus, Coxsackie, ECHO, Influenza viruses-H1N1, H2N2, H5N1, etc., B or C;
- **Bacterial:** Pneumococcus, Streptococcus, Staphylococcus, Moraxella catarrhalis
- **Irritative agents:** like dust, smoke, irritative gases.[4,5]

Recurrent attacks of acute rhinitis in the presence of predisposing factors lead to chronicity. These factors include: the persistence of nasal infections due to sinusitis, tonsillitis, and adenoids; irritation from dust, smoke, cigarette smoke, and industrial irritants; prolonged use of nasal drops; endocrinal or metabolic factors like hypothyroidism, lack of exercise; genetic predisposition; racial dominance; emotional upsets; nutritional deficiency of vitamin A, D and iron; autoimmunity; exposure to hot, dry, dusty environments.

Rhinitis may also be caused by exposure to allergens like pollen from trees and grasses, mold spores, house dust, debris from insects, or housemites in patients with a genetic predisposition. Risk factors for allergic rhinitis include a family history of atopy, serum IgE>100 IU/mL before age of 6 years, higher socioeconomic class, and the presence of a positive allergy skin prick test.

---

1 Dykewicz MS, Fineman S, eds. Diagnosis and management of rhinitis: complete guidelines of the joint task force on practice parameters in allergy, asthma, and immunology. Ann Allergy Asthma Immunol.1998; 81:478–518.

2 Savouré M, Bousquet J, Jaakkola JJK, Jaakkola MS, Jacquemin B, Nadif R. Worldwide prevalence of rhinitis in adults: A review of definitions and temporal evolution. Clin Transl Allergy. 2022 Mar;12(3):e12130.

3 Sukumaran TU. Allergic Rhinitis and Co-morbidities: Training module (ARCTM). Indian Pediatr. 2011; 48: 511-513.

4 Dhingra PL & S. Diseases of Ear, Nose and Throat, 5th Edition. New Delhi: Elsevier, 2010: 168.

5 PFaltz CR, Becker W, Naumann HH, Rudolf C. Ear, nose, and throat diseases: with head and neck surgery ,3rd ed. Stuttgart: Thieme; 2009: p. 150.

DIAGNOSIS[3,6,7]

TYPES	DIAGNOSIS		
	Clinical Presentation	Physical Examination Findings	Investigations
ACUTE RHINITIS **1. Viral** Common cold Influenzal Rhinitis Rhinitis associated with exanthemas **2. Bacterial** **3. Irritative**	• Burning sensation at the back of the nose • Tickling sensation in the nose • Sneezing • Running nose; initially this is watery and profuse but may become mucopurulent due to secondary invasion. • Nasal stuffiness/ congestion cough • Post-nasal drainage • Headache • Loss of smell • Low grade fever	• Nasal mucosa is pale in color. • Turbinates may be swollen	-
CHRONIC RHINITIS **1. Chronic simple Rhinitis** **2. Hypertrophic Rhinitis** **3. Atrophic Rhinitis** **4. Rhinitis sicca** **5. Rhinitis caseosa**	• Nasal obstruction • Nasal discharge: mucoid, mucopurulent, thick, viscid • Post nasal drainage • Foul smell from the nose with marked anosmia (Atrophic Rhinitis) esp. seen in females of the pubertal age group • Nasal obstruction even with unduly wide chambers(Atrophic Rhinitis) • Unilateral affections with the discharge of cheesy offensive material from the nose (Rhinitis caseosa)	• Nasal mucosa is dull red in color • Swollen turbinates which pit on pressure and shrink with the application of vasomotor drops: *Chronic simple Rhinitis,* do not pit on pressure: *Hypertrophic Rhinitis* • Hypertrophy of turbinates • Greenish or grayish black crusts in the cavity which cause bleeding on an attempt to remove *(Atrophic Rhinitis)* • Atrophy of nasal turbinates with unduly wide chambers:*A trophic Rhinitis* • Impairment in hearing tests • Small and underdeveloped paranasal sinuses with thick walls • *Atrophic Rhinitis* • Removal of crusts causes ulceration, epistaxis, and even perforation.	In children with rhinitis, the use of immune studies, sweat test, sinus computed tomography (CT), and nasal endoscopy may be indicated when they are suspected to have comorbid conditions such as immune deficiency, cystic fibrosis (CF), and chronic sinusitis.
ALLERGIC RHINITIS	• No age or sex predilection. May start in infants as young as 6 months or older people. Usually, the onset is at 12-16 years of age. • Seasonal nasal allergy presents as paroxysmal sneezing, 10-20 sneezes at a time, nasal obstruction, watery nasal discharge and itching in the nose. • Perennial nasal allergy isn't that severe. Present as frequent colds, persistently stuffy nose, and loss of sense of smell due to mucosal oedema, post-nasal drip, chronic cough, and hearing impairment.	• Nasal signs: transverse nasal crease; swollen turbinates; presence of thin, watery, mucoid discharge. • Ocular signs: oedema of lids, cobblestone appearance of the conjunctiva, dark circles under the eyes (allergic shiners). • Otologic signs: retracted tympanic membrane or serous otitis media as a result of eustachian tube blockage. • Pharyngeal signs: granular pharyngitis due to hyperplasia of sub-mucosal lymphoid tissue. • Laryngeal signs: hoarseness of voice, oedema of vocal cords	• CBC: reveals eosinophilia • Nasal smear: reveals eosinophils • Skin test to identify the allergen • Radioall-ergosorbent test (RAST): measures Ig E antibody in the patient's serum.
VASOMOTOR RHINITIS	• Paroxysmal sneezing: Bouts start just after getting out of bed in the morning. • Excessive rhinorrhoea • Nasal obstruction: which alternates from side to side • Post - nasal drip	• Nasal mucosa over the turbinates is generally congested and hypertrophic. May be normal in some cases.	

6 CCRH. Homoeopathy for Mother and Child Care (Pediatrics), Training Manual Vol.2, Reprint Edition.New Delhi: Central Council for Research in Homoeopathy; 2010:80-83.

7 Wallace DV, Dykewicz MS, Bernstein DI, Moore JB, Cox L, Khan DA. The diagnosis and management of rhinitis: An updated practice parameter. J Allergy Clin Immunol .2008; 122 (2): Supplement: S1–S84.

COMPLICATIONS[3]

- Recurrent sinusitis
- Nasal polypi
- Serous otitis media
- Orthodontic problems or other ill effects of prolonged mouth breathing
- Bronchial asthma

DIFFERNTIAL DIAGNOSIS

- Measles
- Bronchiolitis
- Pneumonia
- Whooping cough
- Acute bronchitis

EVALUATION AND ASSESSMENT

- Acute rhinitis symptoms score (ARSS) developed by the Central Council for Research in Homoeopathy.[8]
- Rhinoconjunctivitis Quality of Life Questionnaire (RQLQ)[9]

MANAGEMENT

General management

Rhinitis is a common disorder which is seen by the physician in their day to day practice. The following general advice to the patients should be given[3,5,6]

- Avoid exposure to cold weather or intake of cold food.
- Avoid common allergic triggers for rhinitis which include pollens, fungi, dust mites, furry animals, and insect emanations.
- Avoid outdoor activities in morning and evening due to high pollen levels.
- Reduce indoor fungal exposure by removal of moisture sources, replacement of contamination materials.
- Older children should use handkerchief while coughing, sneezing and blowing the nose.
- Encourage hand-washing as it minimizes person to person transmission of the virus.
- Advice for adequate rest, fluid and good nutrition.
- Advice steam inhalation.

---

8 Nayak C, Singh V, Singh K, Singh H, Oberai P, Roja V, et al. A multi-centric open clinical trial to evaluate the usefulness of 13 predefined homeopathic medicines in the management of acute rhinitis in children. Int J High Dilution Res [online]. 2010 [cited 2015 Nov 6]; 9(30):30-42.

9 Juniper EF, Guyatt GH, Griffith LE, Ferrie PJ. Interpretation of rhinoconjunctivitis quality of life questionnaire data. J Allergy ClinImmunol.1996; 98: 843-845.

Homoeopathic management

Effectiveness of homeopathy can be supported by clinical evidence and professional and adequate application be regarded as safe.[10] Numerous clinical studies demonstrate that homeopathy accelerates early symptom relief in acute illnesses at much lower risk than conventional drug approaches. Clinical research in homoeopathy suggests that over the-counter homeopathic medicines offer pragmatic treatment alternatives to conventional drugs for symptom relief in children with uncomplicated URIs.[11] Several researches on this condition and other associated conditions such as allergies, rhinitis, acute respiratory complaints have been treated successfully with homeopathy.[7,12-24]

Around 402 medicines are enlisted in the repertorial index[25] under the symptom coryza. The presenting totality of symptoms in each case is the guide to the correct remedy. However, there are several specific medicines for allergic rhinitis such as ***Ambrosia artmisiae folia:*** Allergic rhinitis with intolerable itching in eyes lids. ***Wyethia helenoids*****:** Itching of throat nose and palate; constantly clearing and hemming the throat, nose feels dry and irritated but still be running. ***Eucalyptus globulus:*** stuffed up sensation in nose, thin watery coryza, continuous running of nose. ***Solidago:*** Rhinitis excited by pollens, burning in throat, repeated colds after tuberculosis. Enlisted below are a few medicines with their indications recommended from experiences, research papers and text books:

10 Bornhoft G, Wolf U, Ammon Klaus v, Righettic M Bergemann SM, et al. Effectiveness, Safety and Cost-Effectiveness of Homeopathy in General Practice – Summarized Health Technology Assessment. ForschKomplementärmed. 2006;13(suppl 2):19–29.

11 Bell IR. Homeopathic Medications as Clinical Alternatives for Symptomatic Care of Acute Otitis Media and Upper Respiratory Infections in Children. Global Advances in Health And Medicine. 2013;2(1):32-43.

12 Haidvogl M, Riley DS, Marianne H, et al. Homeopathic and conventional treatment for acute respiratory and ear complaints: A comparative study on outcome in the primary care setting. BMC Complementary and Alternative Medicine; 2007. 7:7

13 Colin P. Homeopathy and respiratory allergies: a series of 147 cases. Homeopathy. 2006; 95(2): 68-72

14 Allen TF. Encyclopedia of Pure Materia Medica. New Delhi: B Jain Publishers;2009.

15 Taylor R D, Morgan T, Beattie NGM, Cambell JH, McSharry C, Aitchinson T, et al. Is evidence for Homoeopathy reproducible? The Lancet. 1994; 344 (8937):1601-1606.

16 Van Wassenhoven M. Clinical verification in homeopathy and allergic conditions. Homeopathy. 2013 Jan; 102 (1):54-8.

17 Goossens M, Laekeman G, Aertgeerts B, Buntinx F; ARCH study group. Evaluation of the quality of life after individualized homeopathic treatment for seasonal allergic rhinitis. A prospective, open, non-comparative study.Homeopathy. 2009 Jan; 98 (1):11-6.

18 Rossi E, Crudeli L, Endrizzi C, Garibaldi D. Cost-benefit evaluation of homeopathic versus conventional therapy in respiratory diseases.Homeopathy. 2009 Jan; 98 (1):2-10.

19 Kim LS, Riedlinger JE, Baldwin CM, Hilli L, Khalsa SV, Messer SA, Waters RF. Treatment of seasonal allergic rhinitis using homeopathic preparation of common allergens in the southwest region of the US: a randomized, controlled clinical trial. Ann Pharmacother. 2005 Apr;39(4):617-24.

20 Taylor MA, Reilly D, Llewellyn-Jones RH, McSharry C, Aitchison TC. Randomised controlled trial of homoeopathy versus placebo in perennial allergic rhinitis with overview of four trial series. BMJ. 2000 Aug 19-26;321(7259):471-6.

21 Kavishwar VN, Anpat AV. Role of Some Homeopathic Medicines in Allergic Rhinitis; An Investigational Study .Journal of Drug Delivery and Therapeutics. 2019; 9(4-A):310-312.

22 Ramchandani NM. Homoeopathic treatment of upper respiratory tract infections in children: evaluation of thirty case series. Complement Ther Clin Pract. 2010 May;16(2):101-8.

23 Grimaldi-Bensouda L, Bégaud B, Rossignol M, Avouac B, Lert F, Rouillon F, et al. Management of upper respiratory tract infections by different medical practices, including homeopathy, and consumption of antibiotics in primary care: the EPI3 cohort study in France 2007-2008. PLoS One. 2014 Mar 19;9(3):e89990.

24 Steinsbekk A, Fønnebø V, Lewith G,Bentzen N.Homeopathic care for the prevention of upper respiratory tract infections in children: A pragmatic, randomised, controlled trial comparing individualised homeopathic care and waiting-list controls.Complementary Therapies in Medicine.2005;13(4):231-238.

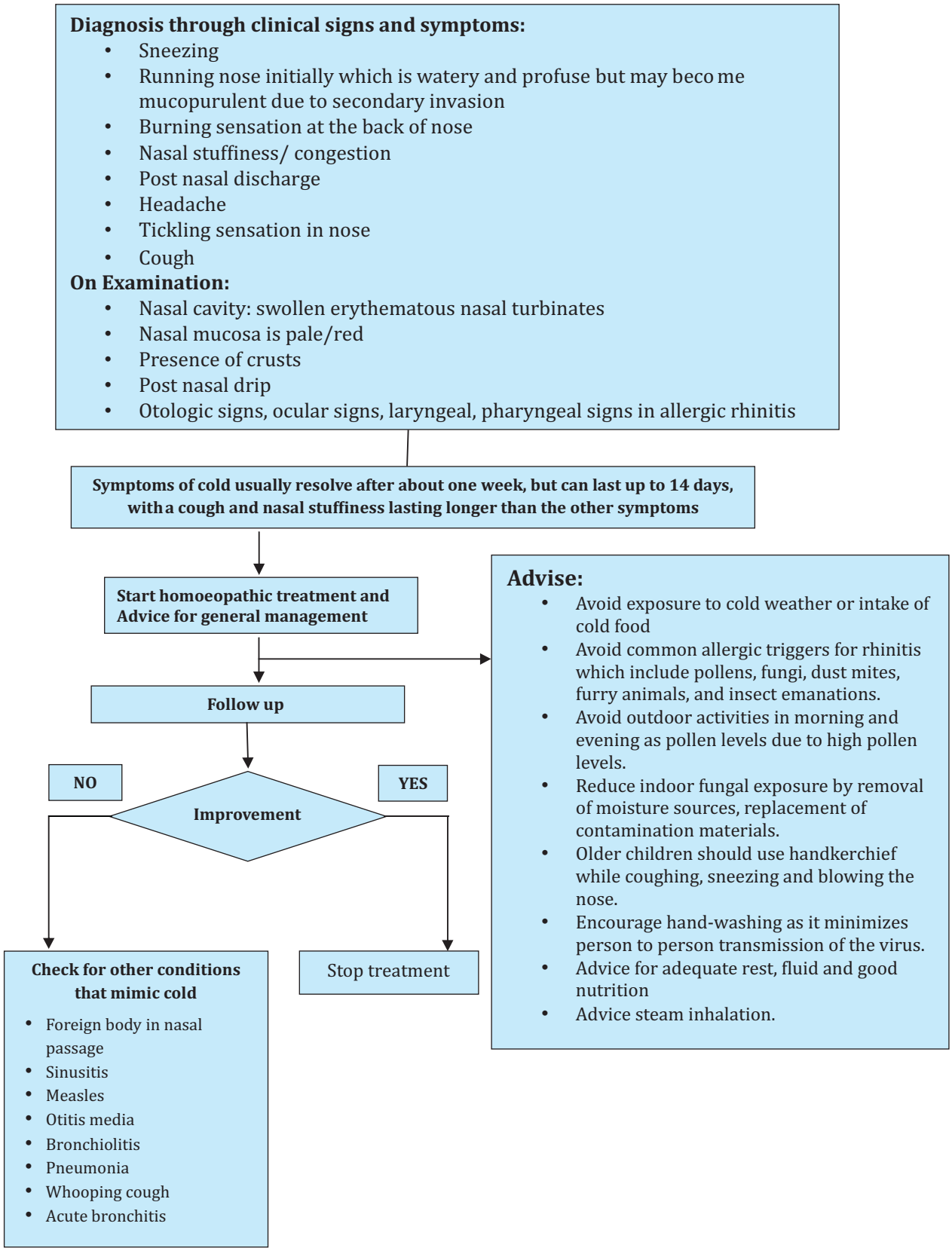
25 Zandovoort R. Complete Repertory. In Shah J Hompath [CD Rom]. 2000-2005.

Medicines	General indications	Characteristic particulars
Allium cepa	*Canine hunger; salivation increased; Worse in cold damp weather, in warm room*	• Rhinitis occurs especially in the month of August every year • Cold begins from right side and travels to left • Nasal discharges watery, copious, acrid and excoriates upper lip with bland lacrimation. Constant sneezing on entering warm room • Burning sensation in eyes as from smoke, must rub them
Euphrasia officianalis	*Chilly patient cannot get warm in bed, subject to colds that affect the eyes; worse in evening, indoors and from warmth; better in open air; starts during sleep*	• Profuse acrid lachrymation but bland coryza • Margins of eyelids red, swollen and burning • Frequent inclination to blink
Nux vomica	*Chilly patient; thin; craves fats, spicy food; tongue coated yellowish in the posterior part; oversensitive to external impressions: noise, odors, light or music; nervous disposition; spare, quick, active, zealous and irritable, impatient, spiteful with violent action*	• Coryza fluent in morning or day; stuffed up at night and outdoors or alternates between nostrils • Crawling and tickling inside the nose which causes sneezing • Acrid discharge, but with stuffed up feeling
Dulcamara	*Chilly patient; skin affections brought on or worse by exposure to cold damp rainy weather; restless and irritable*	• Every time the cold it settles in eyes; thick, yellow discharge; granular lids • Hay - fever; profuse, watery discharge, worse in open air • Dry coryza renewed by slightest exposure to cold, summer colds • Running of nose, sneezing and nasal obstruction, crawling and tickling inside the nose
Pulsatilla nigricans	*Hot patient; Marked changeability of symptoms; aversion to fatty foods, warm foods and drinks, dislikes butter; thirstless with great dryness of mouth; tongue coated yellow or whitish; discharge sthick, bland, and yellowish - green; pains appear*	• Stoppage of nose in the evening; thick discharge in the morning and thin discharge in the evening • Nasal discharges are bland and never irritating • Coryza with nasal discharge

Medicines	General indications	Characteristic particulars
	suddenly, leave gradually; worse towards evening and in the warm room; better in open air, by slow, gentle motion and cold applications; desire for company, mild, gentle, affectionate, yielding, weeping disposition	thick, mucopurulent, yellowish or yellowish-green • Large green fetid scales in the nose; loss of taste and smell
Chamomilla	*Hot patient; Marked changeability of symptoms; aversion to fatty foods, warm foods and drinks, dislikes butter; thirstless with great dryness of mouth; tongue coated yellow or whitish; discharges thick, bland, and yellowish - green; pains appear suddenly, leave gradually; worse towards evening and in the warm room; better in open air, by slow, gentle motion and cold applications; desire for company, mild, gentle, affectionate, yielding, weeping disposition*	• Congestion of the nasal mucosa, thin, watery, bland, copious discharge with occasional sneezing • Fever with irritability, restless, crying always, easily annoyed, better by carrying
Hepar sulphuris	*Extremely chilly patient; hypersensitive (to cold, pain), faints easily; scrawny; glandular constitution; sweats easily; slow to act; irritable; difficult to please*	• Soreness of nostrils, with catarrhal troubles • Sneezes every time he goes into a cold, dry wind, with running from nose, later, thick, offensive discharge • Nose stopped up every time he goes out into cold air. Smell like old cheese • Hay-fever
Mercurius solubilis	*Sensitive to changes of temperature; lax musculature; profuse offensive perspiration; tongue flabby with imprint of teeth, increased salivation; worse at night, in wet damp weather; fearful, shy, hurried, violent, impulsive, weak memory, nervous and irresolute*	• Coryza, with sneezing; sore, raw, smarting sensation; worse, damp weather • Sneezing in sunshine • Profuse, fluent acrid coryza; discharges are too thick to run down the lip worse warm rom • Discharge watery yellowish, acrid, nasal blockage
Kalium bichromicum	*Chilly patient; Susceptible to cold, fat, chubby, short necked, shifting pains ; Aversion and intolerance to meat, desires sour things*	• Coryza with obstruction of nose • Violent sneezing worse in early morning • Profuse, watery nasal discharge

Medicines	General indications	Characteristic particulars
Arsenicum album	*Chilly patient; rapid disproportionate prostration; burning pains better by heat (except headache) and cadaveric odor of discharges and body; increased thirst; drinks often but little at a time; anxiety, anguish and restlessness*	• An excellent remedy for 'winter colds' • Thin, watery and irritating discharge from nose • Tuffed nose with frequent sneezing • Sneezing without relief • Worse in open air
Sabadilla	*Chilly patient; tendency for respiratory allergies; copious salivation; thirstless; canine appetite for sweets, farinaceous food and hot things; nervous, timid, easily startled*	• Coryza, with severe frontal pains , redness of eyes and lachrymation • Copious, watery, nasal discharge. Spasmodic sneezing, with running nose
Arum triphyllum	*Acrid discharges; worse, in cold wet weather and in cold wind lying down; cross, irritable, stubborn, nervous*	• Coryza, sneezing, acrid nasal discharges with raw nostrils and upper lip • Constantly boring and picking at the nose or lip until it bleeds; although the child screams but continues to bore the nose • Raw and sore throat; painful on clearing or coughing • Cold associated with aphthae and cracked sore corners of mouth
Arsenicum iodatum	*Burning; profound prostration; rapid, weak pulse; recurring fever and drenching night sweats; tendency for diarrhoea*	• Ailments in dry and cold weather; worse from tobacco smoke; better in open air • Continuous profuse, irritating and corrosive discharges • Marked itching and burning in nose • Irritation and tingling in nose with constant desire to sneeze, which aggravates • Thin, watery, irritating an excoriating discharges from anterior and posterior nares
Kalium iodatum	*Hot patient; susceptible to cold, but feels better in open air; increased thirst; worse from cold foods and drinks; irritable, harsh tempered, starting from noise*	• Profuse, acrid, hot, watery, thin discharge • Sneezing. Nasal catarrh, involves frontal sinus

ALGORITHM OF TREATMENT PROCESS FOR RHINITIS


Diagnosis through clinical signs and symptoms:
• Sneezing
• Running nose initially which is watery and profuse but may beco me mucopurulent due to secondary invasion
• Burning sensation at the back of nose
• Nasal stuffiness/ congestion
• Post nasal discharge
• Headache
• Tickling sensation in nose
• Cough
On Examination:
• Nasal cavity: swollen erythematous nasal turbinates
• Nasal mucosa is pale/red
• Presence of crusts
• Post nasal drip
• Otologic signs, ocular signs, laryngeal, pharyngeal signs in allergic rhinitis
Symptoms of cold usually resolve after about one week, but can last up to 14 days, with a cough and nasal stuffiness lasting longer than the other symptoms
Start homoeopathic treatment and Advice for general management
Follow up
Improvement
NO
YES
Check for other conditions that mimic cold
• Foreign body in nasal passage
• Sinusitis
• Measles
• Otitis media
• Bronchiolitis
• Pneumonia
• Whooping cough
• Acute bronchitis
Stop treatment
Advise:
• Avoid exposure to cold weather or intake of cold food
• Avoid common allergic triggers for rhinitis which include pollens, fungi, dust mites, furry animals, and insect emanations.
• Avoid outdoor activities in morning and evening as pollen levels due to high pollen levels.
• Reduce indoor fungal exposure by removal of moisture sources, replacement of contamination materials.
• Older children should use handkerchief while coughing, sneezing and blowing the nose.
• Encourage hand-washing as it minimizes person to person transmission of the virus.
• Advice for adequate rest, fluid and good nutrition
• Advice steam inhalation.

Chapter 17

SINUSITIS

SINUSITIS

CASE DEFINITION[1]

Sinusitis is an inflammation of the mucosa lining the paranasal sinuses. The medical term is "rhinosinusitis" ("rhino-" meaning "nose") because it affects the mucous membranes lining the nose and the sinuses (which are air-filled spaces located behind the forehead, nasal bones, cheeks, and eyes in the skull).

INCIDENCE[2,3]

- The incidence of acute sinusitis ranges from 15 to 40 episodes per 1000 patients per year; it is much more common in adults than in children, whose sinuses are not fully developed.
- Maxillary sinusitis is the most common type of sinusitis, followed by ethmoidal, frontal, and sphenoidal sinusitis.
- Dental infection may cause 5-10% of cases of maxillary sinusitis.

AETIOLOGY

A. Exciting Causes

- Nasal allergies
- Nasal infections
- Swimming and diving
- Trauma
- Dental infections

B. Predisposing causes[4,5,6]

1. Local:

- Obstruction of the sinus ostia
- Nasal packing
- Deviated nasal septum
- Hypertrophic turbinates
- Nasal polypi
- Benign or Malignant neoplasm.

---

1 Fact sheet: Acute sinusitis. Informed Health Online [Internet] [cited 23rd August 2015] Available at http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0005171/

2 Worrall G. Acute sinusitis. Can Fam Physician. May 2011; 57(5): 565–567, Available from: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3093592/

3 CCRH. Homoeopathy for Mother and Child Care; Training Manual Vol.2; Reprint Edition. New Delhi: Central Council for Research in Homoeopathy, 2010: 84-87.

4 Dhingra PL & S. Diseases of Ear, Nose and Throat; 5th Edition. New Delhi: Elsevier, 2010: 208

5 Sande MA and Gwaltney JM. Acute Community-Acquired Bacterial Sinusitis: Continuing Challenges and Current Management; CID 2004:39 (Suppl 3):151

6 Sharma SR, Murty KB, Sahagal GC, et al; Clinical Evaluation of homoeopathic medicines in sinusitis; IJRH (2008), Vol.2, No. 1: 26-37

- Congenital anatomical abnormality of the nose and sinuses causing inflammatory oedema of the sinus mucosa as from the common cold.
- Decreased mucociliary activity.

2. General:

- **Environment:** Sinusitis is common in cold and wet climates. Atmospheric pollution, smoke, dust and overcrowding also predispose to infection.
- **Poor general health:** Recent attacks of exanthematous fever (like measles, chickenpox, whooping cough etc.), nutritional deficiency, systemic disorder (diabetes, immune deficiency syndromes).
- **Hereditary:** The underlying causes of acute sinusitis are diverse and include viruses, bacteria, fungi, and allergies. Viral infections are a common cause of acute sinusitis[7]. Most individuals resolve the infection spontaneously and only a small proportion develops a secondary bacterial infection. Acute bacterial rhino sinusitis (ABRS) is generally diagnosed in the presence of more than 7-10 days of nasal discharge. The most common bacteria are Streptococcus pneumonia, Haemophilus influenzae, Moraxella catarrahlis, Group A beta-hemolytic streptococci and Staphylococcus aureus. Anaerobes predominate in rhino sinusitis of dental origin, and fungi and Pseudomonas aeruginosa in immune-compromised patients[8].

RISK FACTORS[9]

- Allergic rhinitis or hay fever
- Cystic fibrosis
- Going to daycare
- Diseases that prevent the cilia from working properly
- Changes in altitude (flying or scuba diving)
- Large adenoids
- Smoking
- Weakened immune system from HIV or chemotherapy

TYPES

There are different types of sinusitis:

- Acute sinusitis: It is the condition when symptoms are present for 4 weeks or less. It is caused by bacteria growing in the sinuses.
- Sub-acute: When the symptoms last for 4-8 weeks.

---

7 Sande MA and Gwaltney JM, Acute Community-Acquired Bacterial Sinusitis: Continuing Challenges and Current Management; CID. 2004:39 (Suppl 3):151

8 Brook I. Acute Sinusitis; Antimicrobe 2010; USA: 2010 [cited 23rd August 2015] Available at http://www.antimicrobe.org/e2.asp#top

9 NLM. Medical encyclopedia of Sinusitis,U.S. National library of medicine [Updated 4/18/2014 , cited 25th September 2015] Available athttp://www.nlm.nih.gov/medlineplus/ency/article/000647.htm

- Chronic sinusitis: In chronic sinusitis, swelling and inflammation of the sinuses are present for longer than 3 months.
- Recurrent sinusitis: When there are several attacks within a year.

DIAGNOSIS

Clinical Presentation[9,10]

The symptoms of acute sinusitis in adults very often follow a cold that does not get better or that gets worse after 5 - 7 days. Symptoms include:

- Symptoms of common cold persist beyond 10 days
- Nasal stuffiness and discharge
- Facial pain on pressure is felt depending on the sinus involved:
  - ➢ Maxillary sinus pain is often perceived as being located in the cheeks or upper teeth.
  - ➢ Ethmoid sinus pain is perceived between the eyes or in the retro-orbital region
  - ➢ Frontal sinus pain is perceived above the eyebrow
  - ➢ Sphenoid sinus pain is felt in the upper half of the face or retro-orbital radiating to the occiput.
- Fever
- Headache
- Bad breath or loss of smell
- Cough, often worse at night
- Pressure-like pain, pain behind the eyes, toothache, or tenderness of the face
- Sore throat and postnasal drip
- Fatigue and a general feeling of being ill

Chronic rhino sinusitis (CRS)[10] refers to a condition when inflammation lasts twelve (12) weeks or longer and causes at least two or more of the following signs and symptoms:

- Muco-purulent drainage (anterior, posterior, or both)
- Nasal obstruction (congestion),
- Facial pain-pressure-fullness, or
- Decreased sense of smell

And inflammation is documented by one or more of the following findings:

- Purulent (not clear) mucus or oedema in the middle meatus or ethmoid region
- Polyps in the nasal cavity or the middle meatus, and/or

10 Rosenfeld RM, Andes D, Bhattacharyya N, Cheung D, Eisenberg S, Ganiats TG, et al. "Clinical practice guideline: adult sinusitis". Otolaryngology--head and neck surgery: official journal of American Academy of Otolaryngology-Head and Neck Surgery 2007; 1. 37 (3 Suppl) : pg1–31.

- Radiographic imaging showing inflammation of the paranasal sinuses
- Recurrent acute rhino sinusitis
- Four (4) or more episodes per year.

Table: Major and minor clinical criteria suggestive of bacterial sinusitis [7]

Major criteria	Minor criteria
Facial pain or pressure (requires a second major criterion to constitute a suggestive history)	Headache
Facial congestion or fullness	Fever (for subacute and chronic sinusitis)
Nasal congestion or obstruction	Halitosis
Nasal discharge, purulence or discoloured postnasal drainage	Fatigue
Hyposmia or anosmia	Dental pain
Fever (for acute sinusitis; requires a second major criterion to constitute a strong history)	Cough
Purulence on intranasal examination	Ear pain, pressure, or fullness
* A strongly suggestive history requires the presence of two major criteria or one major and twoor more minor criteria. A suggestive history requires the presence of one major criterion or two or more minor criteria.	

History[2]

Recorded medical history should include:

- History of upper respiratory allergies
- Previous episodes of sinusitis, and other respiratory tract infections
- Previous use of antibiotics
- Potential of nasal foreign bodies
- Having a child attend a daycare centre
- Immunizations; history of allergy
- Exposure to cigarette smoke

The presence of any swelling and pain especially in the facial, forehead, temporal, orbital area, or any other site in the head should be noted. Information about what makes the symptoms worse or better should be obtained. The length of symptoms such as cough, nasal secretions, headaches, pain, fever, hyposmia, dental pain or problems should be recorded.

Physical Examination[2]

This should include :

- A thorough and complete general and head and neck examination (including the orbit, extra ocular motility, the response of the pupils, vision, and cranial nerve function).
- Palpation and/or percussion over the frontal sinuses, cheeks (maxillary sinuses), and medial orbit (ethmoid sinuses).
- The nasopharynx should be assessed for postnasal drip and obstruction caused by adenoid hypertrophy, choanal atresia, malignancy, polyps, and septal deviation.
- Nasal examination including anterior rhinoscopy with a good light source looking for edema, erythema, crusting, purulent secretion, and the presence of a foreign body.
- Bend the patient's head forward (when sitting) and holding it at knee level for 45–60 seconds can elicit a sensation of fullness and pain at the involved sites (compliance in young patients may be difficult).
- Endoscopic examination performed by an otolaryngologist may localize pus within the nasal cavity directing the examiner to the involved sinus(es); bacterial cultures can also be obtained; however, the specimens may contain nasal mucosal flora.
- Transillumination is infrequently utilized because the findings do not always correlate with the disorder, and reproducibility between observers is poor.

Signs of sinus infection that can be observed by physical examination are:

- Mucopurulent nasal or posterior pharyngeal discharge.
- Erythematous nasal mucosa that can be pale and boggy.
- Signs of throat infection that can be associated with malodorous breath.
- Acute otitis media can be present in association with acute bacterial rhinosinusitis.
- Facial tenderness is inconsistent and nonspecific.
- Periorbital oedema with skin discolouration may be present, especially with ethmoid sinusitis.
- Upper molar teeth pathology may be the source of maxillary sinusitis.

INVESTIGATIONS[9]

1. X-ray examination of Paranasal sinuses: Water's view is taken for better visualization of maxillary sinuses. Caldwell's view is ideally suited for frontal sinuses. The sub-mento-vertical view is ideally suited for Sphenoid sinuses. The lateral view can help in distinguishing various pathologies of frontal sinuses. The oblique view helps in demonstrating posterior ethmoidal air cells and optic foramen.

The following features indicate a bacterial infection:

- Radiologic opacity

- Air-fluid level
- Sinus mucosal thickening-more than 4 mm

2. Transillumination of the sinuses: Press a light source against the patient's upper cheek, close to the nose. Ask the patient to open his mouth widely and look at his palate to see a red spot of light passing through normal sinuses. No red dot or light would be seen if the sinuses are blocked.
3. CT of the sinus is more sensitive, particularly for ethmoid and sphenoid disease. Imaging by X-ray, CT or MRI is generally not recommended unless complications develop. Imaging studies are utilized for the diagnosis of acute bacterial rhino sinusitis. However, they are non-specific and cannot differentiate viral from bacterial rhino sinusitis. For sinusitis lasting more than 12 weeks (Chronic), a CT scan is recommended.

DIFFERENTIAL DIAGNOSIS[11]

- Rhinitis or an upper respiratory infection
- A maxillary toothache can also mimic the pain caused by maxillary sinusitis
- Tension headache
- Vascular headache
- Foreign bodies
- Brain abscess
- Epidural abscess
- Meningitis
- Subdural empyema

EVALUATION AND ASSESSMENT

- Sino-nasal outcome test (SNOT-20)[12]
- Sino Nasal Outcome Test (SNOT 22)[13]
- Chronic Sinusitis Assessment Score[14]

COMPLICATIONS[10]

Although very rare, complications may include:

- Abscess
- Bone infection (osteomyelitis)

11 Battisti AS, Modi P, Pangia J. Sinusitis. [Updated 2022 May 1]. In: Stat Pearls [Internet]. Treasure Island (FL): Stat Pearls Publishing; 2022 Jan.

12 Piccirillo Jay F. Sino-nasal outcome test (snot-20). Washington University School of Medicine, St. Louis, Missouri Available at http://www.northwestern-sinus.com/wp-content/uploads/2011/12/snot20.pdf

13 Kennedy J L, Hubbard MA, Huyett P, Patrie JT, MS, Borish LY, et al. Sino-nasal Outcome Test (SNOT-22): A predictor of post-surgical improvement in patients with chronic sinusitis Ann Allergy Asthma Immunol. 2013 Oct; 111(4): 246–251.e2.

14 Nayak C, Singh V, Singh VP, Oberai P, Varanasi R, Shitanshu SS, et al. Homoeopathy in chronic sinusitis: a prospective multi-centric observational study. Homeopathy. 2012 Apr; 101(2):84-91.

- Meningitis
- Skin infection around the eye (orbital cellulitis)

RED FLAGS

- High fever
- Orbital infections like orbital cellulitis or orbital abscess which are indicated by:
  - ➢ Conjunctival affection
  - ➢ Chemosis
  - ➢ Proptosis
  - ➢ Ophthalmoplegia
  - ➢ Diplopia
- Intracranial complications like meningitis, subdural empyema, epidural abscess, and cerebral abscess
- Bony complications like Pott's puffy tumour, Osteomyelitis and Osteitis.

PREVENTION[10]

The best way to prevent sinusitis is:

- To avoid colds and flu or treat problems quickly.
- Eat plenty of fruits and vegetables.
- Reduce stress.
- Wash hands often, particularly after shaking hands with others.
- Avoid smoke and pollutants.
- Drink plenty of fluids to increase moisture in the body.
- Take decongestants during an upper respiratory infection.
- Treat allergies quickly and appropriately.
- Use a humidifier to increase moisture in the nose and sinuses.
- Breathing exercises and Yoga.

MANAGEMENT

General management

Medicinal management when given along with the following measures can help to effectively manage acute attacks of sinusitis.[9,10]

- Drink plenty of fluids to thin the mucus
- Inhale steam 2 - 4 times per day
- Use nasal spray

Certain other measures when followed can further aid in managing the condition and prevent further attacks. These include:

- Intake of plenty of fruits and vegetables
- Reduction of stress
- Avoidance of smoke and polluted environments
- Prompt treatment of upper respiratory infections and allergies
- Practicing breathing exercises and Yoga

Homoeopathic management

Homoeopathic medicines can help to give relief in the symptoms of sinusitis and reduce the frequency of recurrence of attacks when a constitutional remedy is prescribed after complete case history and analysis and considering all the accessory circumstances of the case. A few research studies show the beneficial role of homoeopathic therapy in such cases.[14-20] Several medicines are given in the homoeopathic repertories for the condition of the sinusitis. 27 medicines are indicated in Murphy's repertory, under the rubric "sinusitis, infection, nose"[21]. In the Synthesis repertory[22], the rubric "Nose - Sinuses; complaints of", 8 medicines are given and under the rubric, "Generals - Inflammation – sinuses" has 35 medicines. Indications of a few specific remedies which may be found useful in cases of sinusitis with the paucity of symptoms include:[23]

***Eucalyptus globulus* -** Chronic catarrhal, purulent, and foetid discharge. Ethmoid and frontal sinuses are involved. ***Teucrium marum varum*-** Chronic nasal catarrh with atrophy; large, offensive crusts and clinkers, ozaena, loss of sense of smell (anosmia).

The commonly indicated remedies with their indications are given below. However, the present totality of symptoms in each individual case shall always be the guide to the indicated remedy.

15 Sharma SR, Murty KB, Sahagal GC, Sharma B, Bharatalaxmi K.S.V. Raju K, Kumar S. Ravi. Clinical evaluation of homoeopathic medicines in sinusitis. Indian Journal of Research in Homoeopathy. 2008;2(1): 26 -37.

16 Ramteke SS, Nayak C, Singh V, Oberai P, Roja V. An open clinical observational study on the usefulness of pre-defined homoeopathic medicines in the management of chronic sinusitis. Indian Journal of Research in Homoeopathy. 2009; 3(1): 34-40.

17 Witt CM, Ludtke R, Willich SN. Homoeopathic treatment of patients with chronic sinusitis: A prospective observational study with 8 years follow up. BMC Ear Nose Throat Disord. 2009; 9:7.

18 Friese KH, Zabalotnyi DI. Homeopathy in acute rhinosinusitis: A double-blind, placebo-controlled study shows the efficiency andtolerability of a homoeopathic combination remedy. HNO 2007; 55:271-7.

19 Zabolotnyi DI, Kneis KC, Richardson A, Rettenberger R, Heger M, Kaszkin-Bettag M, et al. Efficacy of a complex homoeopathic medication (Sinfrontal) in patients with acute maxillary sinusitis: A prospective, randomized, double-blind, placebo-controlled, multicenter clinical trial. Explore (NY). 2007; 3:98-109.

20 Misra P, Nayak C, Chattopadhyay A, Palit TK, Gupta B, Sadhukhan S, et al. Individualized Homeopathic Medicines in Chronic Rhinosinusitis: Randomized, Double-Blind, Placebo-Controlled Trial. Homeopathy. 2021 Feb;110(1):13-26.

21 Murphy R, Homoeopathic Medical Repertory. Third Edition. Lotus Health Publishers; 2005.

22 Schroyens F, Synthesis Repertory. RADAR Repertory Program. Treasure edition. CD ROM. Archibel:2007.

23 Boericke W, Boericke's New Manual of Homoeopathic Materia Medica with Repertory: Third Revised & Augmented Edition based on Ninth Edition. New Delhi: B. Jain Publishers. 2010.

Medicines	General indications	Characteristic particulars
Belladonna	*Sudden, violent effects; dryness; bright redness; burning heat: and throbbing pains appear and disappear suddenly. Wildly delirious, restless, sensitive, nervous; jovial and entertaining when well but violent when sick*	• Ailments from exposure to cold wind • Right-sided complaints • Throbbing frontal right - side headache with congestion of face characterized by sudden, violent effects, bright redness, burning heat, and throbbing pains, appear and disappear suddenly • Coryza; mucus mixed with blood
Nux vomica	*Chilly patient; thin; craves fats, and spicy food; tongue coated yellowish in the posterior part; oversensitive to external impressions: noise, odours, light or music; nervous disposition; spare, quick, active, zealous, irritable, impatient, spiteful with violent action*	• Stuffy colds after exposure to a dry, cold atmosphere; stuffed up, at night • Frontal headache with a desire to press the head against something • Coryza: fluent in the daytime; stuffed up at night and outdoors; or alternates between nostrils
Pulsatilla nigricans	*Hot patient; Marked changeability of symptoms; aversion to fatty foods, warm foods, and drinks, dislikes butter; thirstless with great dryness of the mouth; tongue coated yellow or whitish; discharges thick, bland, and yellowish green; pains appear suddenly, leave gradually; worse towards evening and in the warm room; better in the open air, by slow, gentle motion and cold applications; desire for company, mild, gentle, affectionate, yielding, weeping disposition*	• Maxillary, frontal and fronto - maxillary sinusitis • Thick, bland, yellowish - green discharge • Bad smell as of old catarrh with anosmia • Wandering stitching pain around the head, pain extends to face and teeth • Pressing pain at the root of the nose • Headache worse when lying down and in a warm room, relief from slow walking in the open air, wrapping the head tightly in a bandage
Hepar sulphuricum	*Extremely chilly patient; hypersensitive (to cold, pain), faints easily; scrawny; glandular constitution; sweats easily; slow to act; irritable; difficult to please*	• Sinusitis of allergic origin; sensitive to cold • Acute sinusitis (frontal / fronto -maxillary) becoming chronic with the passage of time

Medicines	General indications	Characteristic particulars
Natrum muriaticum	*Hot patient: poorly nourished, great emaciation (marked on the neck); losing flesh while living well; craving for salt; aversion to bread and fatty things; constipated, increased thirst; mapped tongue with red insular patches; melancholic; sad, plays alone; Irritable, cross, cries when spoken to; awkward, hasty, drops things from nervous weakness; disposition to weep without cause, consolation aggravates*	• Allergic rhinitis, sneezing culminating into sinusitis • Patient worse in dry, cold air, better in damp weather • Left - sided headache, as if bursting, with a red face • Catarrhal headache is better by pressure • Headache from sunrise to sunset, better by perspiration
Kali bichromicum	*Chilly patient; susceptible to cold; fat, chubby, short - necked, intolerance to meat, desires sour things; indolent, indifferent to intolerance to meat, desires sour things; aversion to mental and physical labour*	• Pain in forehead over eyebrows and at the root of nose, aggravated by touch • Semi-lateral headache in small spots from suppressed catarrh • Tough, ropy, and greenish mucus nasal discharge or discharge of plugs and clinkers • Headache worse from cold, when walking, stooping and in the morning better by applying pressure
Lachesis mutus	*Hot patient; thin and emaciated; hemorrhagic diathesis; great sensitiveness to touch; hot flushes and perspiration; all complaints worse after sleep; loquacious, jumps from one idea to another, jealous, suspicious, indolent*	• Left - sided chronic maxillary sinusitis, nasal obstruction causing choking at night • Highly offensive mucopurulent nasal discharge from the left nostril. Sometimes discharge is blood - stained
Mercurius solubilis	*Sensitive to changes in temperature; lax musculature. profuse offensive perspiration; tongue flabby with an imprint of teeth, increased salivation; worse at night, in wet damp weather: weak memory, fearful, shy, hurried, violent, impulsive, nervous, irresolute*	• Nostrils raw and ulcerated due to acrid coryza • Catarrhal headache with much heat in the head • Sore, raw, smarting sensation in the nose, worse in damp weather • Pressure in the forehead and pain in the bone beneath the eyebrows, even to touch • Yellow - green, foetid, pus - like discharges

Medicines	General indications	Characteristic particulars
Silicea terra	*Extremely chilly patient: all symptoms worse by cold except stomach complaints, which are ameliorated; Profuse, offensive discharges; sweats profusely, especially on feet; Easy suppuration; glandular affinity; large head and distended abdomen; weak ankles, slow in learning to walk; constipation; Obstinate, headstrong, cries when spoken kindly to, nervous, apprehensive, Oversensitive, irritable and fearful*	• Chronic sinusitis, lasting several months after every cold • Headache: pain starts from the nape of neck to the vertex, and settles over one eye, especially the right; worse from the draft of air, uncovering the head, better from pressure, wrapping up warmly and profuse urination
Sanguinaria canadensis	*Right-sided complaints; increased thirst, aversion to butter and fatty food; desire for highly seasoned food; worse from sweets, the heat of the sun; grumbling child, indolent, disinclined to mental effort*	• Right sided headache begins in the occiput, spreads upward and settles over the right eye • Pain begins in the morning increases during the day and lasts till evening • Burning sensation in eyes and circumscribed redness of cheeks • Diarrhea as coryza improves • Pain is worse while lying down and sleeping, better from motion and touch
Spigelia	*Chilly patients; anaemic debilitated subjects of rheumatic diathesis; persons with light hair; pale, thin, bloated, weak; wrinkled, yellow, earthy skin; body painfully sensitive to touch; part touched feels chilly; touch sends shudder through the whole frame; afraid of sharp, pointed things, pins, needles, etc.*	• Left - sided headache from morning until sunset • Copious offensive mucus from posterior nares, drops into the throat, causing choking at night • Sharp, stabbing, sticking pains through the eyeballs back into the head; from cold, damp, rainy weather
Tuberculinum	*Takes cold easily; light complexion; tall, slim, fat, narrow-chested; active and precocious mentally but weak physically; emaciated with good appetite; family / personal history of*	• Headache: chronic, pain intense, sharp, cutting, from above right eye to occiput as of an iron hoop around the head, when the best-selected remedy only palliates

Medicines	General indications	Characteristic particulars
	tuberculosis; changeability of symptoms; irritable, fretful, desire to use foul language, discontented, fear of dogs	
Hydrastis canadensis	*Weak, debilitated children; prone to viscid, mucous discharges; aversion and intolerance to vegetables; desires egg*	• Coryza, often leads to sinusitis • Thick, ropy, or stringy, yellow discharges • Post-nasal catarrh • Dull pressing frontal pain associated with constipation
Sticta pulmonaria	*Dryness of all mucous membranes; Sensitive to sudden; changes in temperature. Must keep talking*	• Dull headache with dull heavy pressure in the forehead specifically at the root of the nose • Catarrhal headache before discharge appears, accompanied by burning and soreness of the eyeball • Sensation of fullness at the root of the nose • Dry scabs in the nose especially in the evening and at night
Aurum metallicum	*Hot patient; ailments from grief, disappointed love, business reversals and humiliation; craving for and better from open air; egotism, haughty and arrogant, Spiritual inclination, and desire for prayer or meditation, many complaints come on only in winter; from sunset to sunrise, cold bathing; depressive, hopeless, constant desire to commit suicide*	• Nose ulcerated, painful, swollen, obstructed • Inflammation of nose; caries; fetid discharge, purulent, bloody • Putrid smell from the nose • Boring pains in the nose

ALGORITHM OF TREATMENT PROCESS FOR SINUSITIS

Diagnosis through clinical signs and symptoms:

Acute Sinusitis

- Nasal congestion or obstruction
- Nasal discharge, purulence or discoloured postnasal drainage Facial pain or pressure (requires a second major criterion to constitute a suggestive history)
- Facial congestion or fullness
- Hyposmia or anosmia
- Fever (for acute sinusitis; requires a second major criterion to constitute a strong history)
- Purulence on intranasal examination

Chronic Sinusitis

When inflammation lasts twelve (12) weeks or longer of two or more of the following signs and symptoms:

- Mucopurulent drainage (anterior, posterior, or both)
- Nasal obstruction (congestion),
- Facial pain-pressure-fullness, or
- Decreased sense of smell

Clinical examination/Investigations:

1. Transillumination of the sinuses: Press a light source against the patient's upper cheek, close to nose. Ask the patient to open his mouth widely and look at his palate to see red spot of light passing through in normal sinuses. No red dot or light would be seen if sinuses are blocked.
2. X-ray examination: Following features indicate bacterial infection.
3. Radiologic opacity
   - Air-fluid level
   - Sinus mucosal thickening-more than 4 mm
4. CT of sinus is more sensitive particularly for ethmoid and sphenoid disease.

Start homoeopathic treatment and advise for general management

Follow up

Improvement

NO

YES

Consider for integrative treatment

Continue homoeopathic Treatment

Check for complete resolution

If resolution is incomplete

Reassess the case and give appropriate homoeopathic medicine

If resolution is Complete

Stop treatment

General management:

- Apply a warm, moist washcloth to face several times a day.
- Drink plenty of fluids to thin the mucus.
- Inhale steam 2 - 4 times per day (for example, while sitting in the bathroom with the shower running).
- Spray with nasal saline several times per day.
- Use a humidifier.
- Avoid bending over as it may increase facial pain.

Red Flags

- High fever
- Orbital infections like orbital cellulitis or orbital abscess which is indicated by:
- Erythema
- Conjunctival affection
- Chemosis
- Proptosis
- Ophthalmoplegia
- Diplopia
- Intracranial complications like: Meningitis, subdural empyema, epidural abscess, and cerebral abscess
- Bony complications like: Pott's puffy tumour, Osteomyelitis and Osteitis.

Chapter 18

UROLITHIASIS

UROLITHIASIS

CASE DEFINITION[1]

The deposition or formation of stones in the urinary tract is called urolithiasis. A stone is an aggregation of solute materials from urine into a solid form. Most often it is a hard substance and calciferous due to its calcium content. Usually, it is the solute constituents of urine such as calcium, oxalate, phosphate and uric acid which form stones but occasionally products of bacterial infection can form soft stones also called matrix stones.

Urinary stones, according to its location in the urinary system, are labeled as renal calyceal or pelvic stone, ureteral stone, bladder stone and urethral stone.

INCIDENCE/PREVALENCE

- Urinary stone disease is a worldwide common health problem and causes significant morbidity and contributes even to mortality. The epidemiology of urolithiasis differs in terms of geographical area, age and sex distribution, stone composition and stone location.
- Epidemiological surveys have been previously reviewed showing that in economically developed countries the prevalence rate ranged between 4% and 20%.[2]
- In developing countries, the prevalence of stones is probably underestimated considering that silent and not yet discovered kidney stones were diagnosed by renal sonography in 3% of non-symptomatic subjects.[3]

AETIOPATHOGENESIS

Mechanism of stone formation

Stone formation is the culmination of a series of physiochemical events that occurs as the glomerular filtrate traverses through the tubules of nephron. The most fundamental step in stone formation is the supersaturation of urine with stone forming salts resulting in crystallization of the dissolved ions or molecules. Once formed, crystals may flow out with the urine or become lodged in the kidney at different sites. Once retained at such sites there is further growth of the crystal and aggregation leading to stone formation.

Calcium is the most common component of urinary calculi. It is a major constituent in nearly 75% of stones. Following are types of stone and their compound:

---

1 Central Council for Research in Homoeopathy. Urolithiasis; Disease Monograph-5. New Delhi: Central council for Research in Homoeopathy, 2011.

2 Hesse A. Reliable data from diverse regions of the world exist to show that there has been a steady increase in the prevalence of urolithiasis. World J Urol. 2005(5); 23:302–3.

3 Buchholz NP, Abbas F, Afzal M, Khan R, Rizvi I, Talati J. The prevalence of silent kidney stones–an ultrasonographic screening study. J Pak Med Assoc. 2003;53(1):24–5.

Table 1: Types of stones

Type	Compound
Calcium stones	Calcium oxalate dehydrate
	Calcium oxalate monohydrate
	Calcium phosphate
Non-calcium stones	
Infection stones	Magnesium ammonium phosphate
	Carbonate apatite
	Matrix calculi
Uric acid and urates	Uric acid, Ammonium urate, Sodium urate
Cystine	Cystine
Drugs	Indinavir, Triamterene

Calcium oxalate makes up about 60% of all stones; mixed calcium oxalate and hydroxyapatite makes up 20%; and brushite stones constitute 2% of the stones. Both uric acid and struvite (magnesium ammonium phosphate) stones occur approximately 10% of the time. Cystine stones are very rare and only 1% of all urinary stones contain cystine.

Recurrence rates are estimated at about 10% per year, totaling 50% over a 5-10 years period and over 75% over 20 years. Age and sex differentials in urinary stone formers are substantial: more common in males of age group 30-40 years in the industrialized countries and in children under 10 years in the developing countries.

RISK FACTORS

The risk factors for stone formation are discussed under the following four headings:

- *General risk factors:*
  - Occupation that involves exposure to radiant heat. Mostly people who are working outdoors or near heated equipment
  - Gender
  - Climate and geography
  - Intake of hard water for drinking purpose
- *Metabolic risk factors:*
  - o Calcium stones
    - Hypercalciuria (35% to 65%)
    - Hyperoxaluria
    - Hyperuricosuria
    - Hypocitraturia (20% to 60 %)

    - Low Urine pH
    - Hypomagnesuria
  - Uric acid stones
    - Low Urine pH
    - Low urine volume
    - Hyperuricosuria
- *Urinary tract infections (5% to 15%)*
  - Proteus
  - Klebsiella
  - Pseudomonas
  - Staphylococcus species
  - Proteus mirabilis
- *Anatomic risk factors*
  - Ureteropelvic Junction Obstruction (20%)
  - Horseshoe Kidneys (0.25%)
  - Calyceal Diverticula (40%)

DIAGNOSIS[1]

Diagnosis is based on clinical signs and symptoms followed by confirmation with radiological evidence of stone by X-ray & ultrasound (Kidney, Ureter & Bladder) and laboratory investigations.

Clinical Presentation

Symptoms

- Metabolic risk factors: Symptoms of Acute Renal colic- Pain in flank which may spread downwards and anteriorly towards ipsilateral groin, and testis in male and vulva in females, sometimes extending to thigh, excruciating pain.
- Severe pain- Most of the patients with urolithiasis experience pain which may vary from dull aching to severe colicky in nature. The site of pain differs depending upon the position of stone.

  Acute Renal Colic- When stone is at the renal pelvis.

  Acute Ureteric Colic- When stone is in the ureter.
- Strangury- It is severe pain experienced at the tip of penis in males and at labia majora in females accompanied by intense desire to pass urine but resulting only in the passage of a few drops of urine, which may or may not be blood stained. This is typical of urinary bladder calculi. Sometimes similar type of pain is experienced when the stone becomes impacted in posterior urethra.
- Burning micturition.
- Haematuria or reddish discoloration of urine.

- Urgency and frequency of urine
- Dysuria
- Fever
- Vomiting.

Signs

- Rigidity of lateral abdominal wall
- Tenderness over renal angle/kidney region
- Percussion over kidney or renal angle leading to stabbing pain
- Reduced output of urine
- Haematuria
- Rise in body temperature
- Increase in blood pressure.

INVESTIGATIONS[1]

- ***Plain X-ray of KUB:*** A plain film of kidney, ureter and bladder area (KUB) usually shows a radio-opaque density. In case of doubt a lateral radiograph is done.Ninety percent of urinary stones are radio-opaque and will be seen on plain film.
- ***Ultrasonography of KUB:*** Ultrasound examination of kidneys can reveal the presence, position of stone and helps in measuring the exact size of the stonein kidney. At the same time the structural alterations in terms of hydronephrosis or any other anatomical changes taking place in the kidneys can be known. The location and the size help in determining the approach to treatment and therapeutic strategy.It is most valuable in locating stone for treatment by extracorporeal shock wave lithotripsy (ESWL).
- ***Excretory urography (Intravenous urography):*** Kidney function should be normal for this investigation. It will establish the presence and exact location of calculus within the urinary tract. It also gives important information regarding the function of kidney on the same side as well as function of the other kidney. IVU is done before any surgical treatment.

Other laboratory investigations include:

- Routine urine examination and culture if required
- Renal/kidney function test
- Complete haemogram
- Serum calcium, uric acid, phosphate, alkaline phosphatase
- Stone analysis (for recurrent stone formers).

Most of the cases of Urolithiasis will require only these above-mentioned investigation for diagnosis.

However, in some difficult situations, a few other investigations are also helpful as mentioned below:

- ***Retrograde uropyelography:*** It is used when there is doubt about an intraluminal lesion or if the renal function is deranged where Intra venous Pyelogram cannot be done. It is valuable in cases with radiolucent stone. It is usually performed as an immediate preliminary to an endoscopic procedure for stone removal.
- ***Spiral CT-scan:*** Non contrast spiral CT scan has now become an important investigationfor acute ureteric colic and for diagnosing ureteric calculi.
- ***Urethrocystoscopy:*** Usually not required for diagnosis of Urolithiasis but it is used for endoscopic treatment of lower urinary tract calculi. An impacted urethral stone can be confirmed and treated by urethrocystoscopy.

COMPLICATIONS

Acute

- ***Acute retention of urine:*** A large urethral stone may completely block the urethra and may cause acute retention of urine. Patient presents with symptoms of acute retention with painful and distended bladder. Sometimes the impacted stone can be felt with fingers palpating the anterior urethra and glans.
- ***Urinary infection:*** The urinary tract infection is dangerous in presence of obstruction. There is a risk of life-threatening septicaemia.

Long Term

- ***Hydronephrosis:*** It is the most common delayed complication of an obstructing calculus untreated for some time. Any calculus which is causing proximal hydronephrosis with significant back pressure should be treated and removed before the kidney function deteriorates.
- ***Pyonephrosis:*** It results from infection of hydronephrosis. The kidney becomes a multilocular sac containing pus or purulent urine. Pyonephrosis is usually unilateral. There is real danger of permanent renal damage and lethal septicaemia.
- ***Renal failure (Uraemia):*** When there are bilateral renal stones, especially stag horn for long time, there is gradual derangement of renal functions without any symptoms and leads to chronic renal failure. All the features of uremia are present and on investigation they are found to have bilateral obstructing urolithiasis. Similarly, bilateral ureteric calculi may also cause uremia.
- ***Anuria:*** Anuria is defined as complete absence of urine production of urine <100ml in 24 hours.
- ***Development of cancer in pelvicalyceal system:*** Occasionally long-standing stone in renal pelvis may be associated with the development of renal pelvic tumor.

DIFFERENTIAL DIAGNOSIS[1]

It is important to distinguish urolithiasis from the many other conditions (gynaecologic and non-gynaecologic) that can cause flank pain:

• Abdominal Abscess	• Papillary necrosis
• Acute Glomerulonephritis	• Pelvic Inflammatory Disease
Appendicitis	• Pyonephrosis
• Cholecystitis	• Rectal Foreign Bodies
• Cholelithiasis	• Renal arteriovenous malformation
• Diverticulitis	• Renal Cell Carcinoma
• Epididymitis	• Renal Vein thrombosis Imaging
• Gastritis and Peptic ulcer Disease	• Small Bowel Obstruction
• Gastrointestinal Foreign Bodies	• Splenic Abscess
• Ileus	• Testicular torsion
• Inflammatory Bowel Disease	• Urinary Tract Infection in male and female
• Large Bowel Obstruction	• Urinary Tract Obstruction
• Liver Abscess	• Viral Gastroenteritis
• Pancreatitis	

RED FLAGS[4]

- Fever or other features, e.g., rigors, consistent with systemic infection which can lead to life-threatening sepsis
- Suspected bilateral obstructing stones
- Known clinically significant renal impairment
- The presence of only one kidney
- Pregnancy

EVALUATION AND ASSESMENT[5]

The assessment scale given below has been developed by Central Council for Research in Homoeopathy

4 Managing patients with renal colic in primary care. Best Practice Journal [Internet] 2014; Issue 60 (cited 2016 June 1) Available from: http://www.bpac.org.nz/BPJ/2014/April/docs/BPJ60-colic.pdf

5 Siddiqui VA, Singh H, Gupta J, Nayak C, Singh V, Sinha MN, et al. A multicentre observational study to ascertain the role of homoeopathic therapy in Urolithiasis. Indian Journal of Research in Homoeopathy. 2011; 5(2): 30-9..

Urolithiasis Symptom Score (Circle relevant number on each line)				
Pain/colic	0 No pain	1 Mild pain	2 Moderate pain	3 Severe pain
Haematuria	0 No haematuria	1 Microscopic	2 Persistent	3 Gross
Dysuria	0 No dysuria	1 Mild dysuria	2 Moderate dysuria	3 Severe
Stone		1 Single stone	2 Multiple stone	
Size of stones	0 Gravel < 03mm	13 mm - < 4 mm	24 mm - < 5 mm	35 mm and above
Position of stone in kidney	0 no stone in kidney	1Pelvic ureteric junction	2 Pelvis of kidney	3 Calyces of kidney
Position of stone	0 no stone in ureter	1 Lower part of ureter	2 Middle of ureter	3 Upper part of ureter
Position of stone	0 no stone in bladder	1 Base of bladder	2 Intramural ureter	

Total scoring – 22, 1-7 mild, 8-14 moderate,15-22 severe. Symptoms score – (Sum of 8 circled numbers)

PREVENTION

Several preventive measures when followed can aid in reduction of formation of urinary calculi. Advice about such measures must be given to all the patients to check the incidence of recurrence of stone formation as well as part of effective general management during treatment:

- Maintenance of adequate water and fluid intake (at least 2.5–3.0 l) so as to produce a daily urine output of about two and a half liters,
- Consumption of a diet rich in fiber and natural forms of citrate in diet,
- Restriction of salt intake,
- Regular exercise and maintenance of BMI between 18.5–24.9 kg/m^2,
- Reduction of factors associated with obesity, i.e., excessive consumption of animal proteins, fats or refined carbohydrates (particularly fructose).

MANAGEMENT

General management

All urinary stones do not require surgical intervention. Kidney stones may present as acute renal colic requiring immediate management or sometimes may even remain asymptomatic for long. Fluid intake and dietary changes are important measures in preventing recurrence of kidney stones and it should mainly include water.

A small reduction in urinary oxalate has been found to be associated with significant reduction in the formation of calcium oxalate stones; hence, oxalate-rich foods like cucumber, green peppers, beetroot, spinach, soya bean, chocolate, rhubarb, popcorn, and sweet potato should be avoided. Many studies have found calcium restriction to increase the risk of stone disease; therefore, dietary calcium restriction is not recommended.[6]

Homoeopathic management

Homoeopathic medicines had wide scope in managing patients from urolithiasis and can play a role in management of new case with renal stones and as well as recurrent stones. Apart from managing acute attacks, recurrence of renal stones is the area where homoeopathic medicines have greater scope when prescribed along with ancillary measures. Individualized constitutional medicines as per indications are helpful in such cases to prevent recurrent episodes of pain and recurrence of stone formation, once the acute episode has tided over and managed effectively.

A few research studies and case reports show the beneficial role of homoeopathic medicines in such cases.[5-11] There are 32 medicines in Homoeopathic Medical repertory[12] for "kidney stones". Many rubrics reflect medicines which are indicated in conditions where renal colic is associated with other concomitant symptoms. A few medicines are known for their beneficial role in acute renal colic include: ***Cantharis:*** constant desire to micturate with violent paroxysms of cutting and burning pain in renal region. ***Equisetum hyemale:*** frequent urging with severe pain at close of micturition. ***Hydrangea:*** renal calculi with colic, hematuria and profuse deposit of white amorphous salts in urine; sharp pain in left loins with enlarged prostate. ***Ocimum canum:*** right sided renal colic with red sand in the urine and the urine has odour of musk. ***Morgan gaertner (Paterson):*** may be considered as a possible remedy in cases of renal colic.

---

6 Barnela SR, Soni SS, Saboo SS, and Bhansali AS. Medical management of renal stone Indian J Endocrinol Metab. 2012; 16(2): 236–239.

7 Jyothilakshmi V, Thellamudhu G, Kumar A, Khurana A, Nayak D, Kalaiselvi P Preliminary investigation on ultra-high diluted B. vulgaris in experimental urolithiasis. Homeopathy. 2013;102(3):172-8.

8 Gupta AK, Gupta J, Siddiqui VA & Mishra A. A big urinary calculus expelled with homoeopathic medicine. Indian Journal of Research in Homoeopathy.2008; 2(4);50-5.

9 Bhalerao R, Oberai P, Mehra P, Rai Y, Choubey G, Sahoo AR, Majumder A K, Sah M, Gupta A K, Tyagi A K, Siddiqui V A, Kumar A, Manchanda RK. Lycopodium clavatum for the management of urolithiasis: A randomised double blind placebo controlled trial. Indian J Res Homoeopathy. 2019;13:139-49.

10 Nayak C, Sahoo AR, Nayak C. Thlaspi bursa pastoris in Treatment of Urinary Stones: A Case Series. Homeopathy. 2020; 109(04): 238-242.

11 Sahoo AR, Hati AK, Nayak C, Nayak C. Treatment of Urinary Stones with Constitutional Homoeopathic Medicines— Two Evidence-Based Case Reports. Homœopathic Links. 2019;32(1):36–42.

12 Murphy Robin. Homoeopathic Medical Repertory. Third Edition. Lotus Health Publishers; 2005.

Given below are indications of medicines commonly prescribed in urolithiasis:[1,13,14]

Medicines	General indications	Characteristic particulars
Belladonna	*Sudden, violent effects; dryness; bright redness; burning heat; throbbing pains, appear and disappear suddenly; wildly delirious, restless, sensitive, nervous; jovial and entertaining when well but violent when sick*	• Acute renal colic with shooting, burning type of pain in the renal region; coming and going suddenly, in repeated attacks • Extreme sensitiveness to least jar, touch, bedclothes • Colicky pains worsen by bending double or bending backward; also better by lying on the abdomen. Urine may even be frequent and profuse
Berberis vulgaris	*The renal or vesical symptoms predominate; Sharp stitching colicky pains which radiate; Rapid change of symptoms – pain changes in regard to place and character; Thirst alternates with thirstlessness; persons with pale, earthy complexion, with sunken cheeks and hollow, blue-encircled eyes; Listless, apathetic, indifferent; Anxiety before sleep in the evening*	• Renal colic worse left side • Pain in small of back, very sensitive to touch in renal region; worse when sitting and lying, from jar, from fatigue • Burning and soreness in region of kidneys. Numbness, stiffness, lameness with painful pressure in renal and lumbar regions • Stitching, cutting pain from left kidney following course of ureter into bladder and urethra • Renal colic worse on left side with urging and strangury • Rubbing sensation in kidneys. Urine: greenish, blood-red, with thick, slimy mucus; transparent, reddish or jelly-like sediment • The emission of urine is frequently accompanied by pains in thighs and loins
Lycopodium clavatum	*Intellectually keen but physically weak; upper part of body emaciated, lower part semi dropsical; Complexion pale, dirty, sallow with deep furrows; looks prematurely old; Recurrent*	• Right side renal calculi • Pain in the back better after urinating • Polyuria during the night. Heavy red sediment

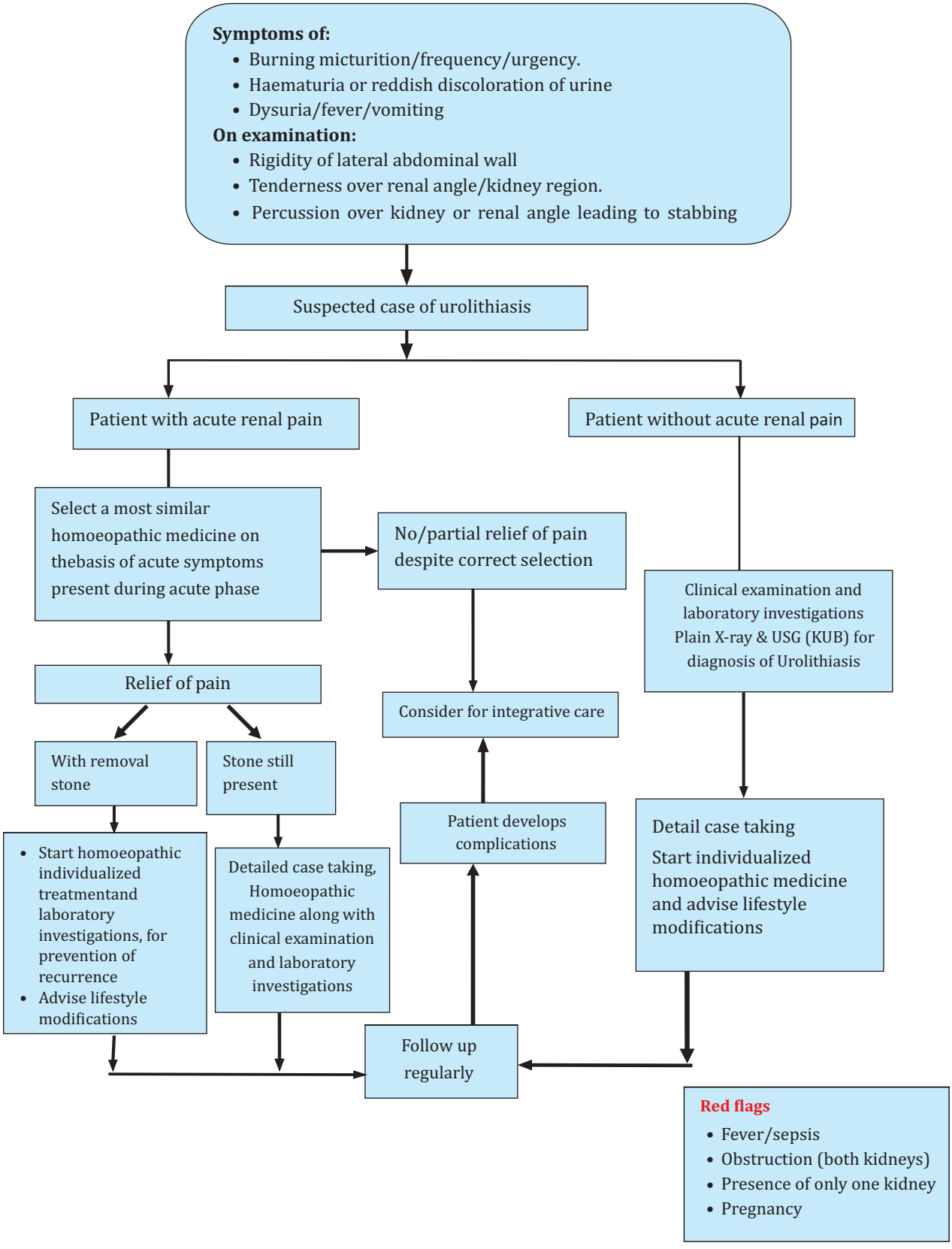
13 Boericke W. Boericke's New Manual of Homoeopathic Materia Medica with Repertory: Third Revised & Augmented Edition based on Ninth Edition. New Delhi: B. Jain Publishers; 2007.

14 Allen HC. Keynotes And Characteristics With Comparisons of some of the Leading Remedies of the Materia Medica. New Delhi: B.Jain Publishers (P) ltd.;2007.

Medicines	General indications	Characteristic particulars
	respiratory and gastro-intestinal affections; tendency for flatulent dyspepsia; Complaints worse from 4 to 8 pm; Right sided complaints or symptoms shift from right to left; desires warm foods and drinks, sweets; Dominating, cranky, lack of self-confidence, precocious	• Urine slow in coming; must strain; cries before urinating
Sarsaparilla	*Chilly patient with cold limbs; thin, frail, sickly; dry and flabby; face looks old; skin shriveled; enlarged abdomen; great emaciation; prone to develop rash in spring/summers; tendency for calculi; sensitive, easily offended, ill humored and taciturn*	• Right sided renal colic • Severe, unbearable pain at conclusion of urination • Bladder distended and tender • Urine bright and clear but irritating; scanty, slimy, flaky, sandy, copious and passed without sensation • Screams before and while passing urine • Pain in the meatus while passing urine
Phosphorus	*Chilly patient; tall fast growing child with tendency to stoop; hemorrhagic tendency; craving for salt, cold food and drink; oversensitive to external impressions; nervous and affectionate, anxious especially during thunderstorm*	•· Renal calculi with congestive and inflammatory symptoms • Dull pain in renal region, tension over the region of bladder • Burning and twitching in urethra and frequent desire to urinate • Urine profuse, pale, watery, frequent or scanty, completely suppressed, turbid with brick dust sediments • Urine offensive; smelling like garlic
Calcarea carbonica	*Chilly patient; takes cold easily; fat, fair, flabby with large head, distended abdomen with red face; pale, weak, easily tired; head sweats profusely while sleeping; sour smelling discharges; longing for fresh air; slow development of milestones; tendency for lymphatic glandular enlargement;*	• Urinary calculi; stone in bladder • Pain is of pressing type, in kidneys and loins. Aching in kidneys and lumbar region worse riding • Dark, brown, sour, fetid, abundant, with white sediment, bloody. Irritable bladder

Medicines	General indications	Characteristic particulars
	desire for eggs and indigestible things; aversion to meat & milk; fearful, timid, shy, slow and sluggish	
Pulsatilla nigricans	*Hot patient; Marked changeability of symptoms; aversion to fatty foods, warm foods and drinks, dislikes butter; thirstless with great dryness of mouth; tongue coated yellow or whitish; discharges thick, bland, and yellowish green; pains appear suddenly, leave gradually; worse towards evening and in the warm room; better in open air, by slow, gentle motion and cold applications; desire for company, mild, gentle, affectionate, yielding, weeping disposition*	• Burning in orifice of urethra during and after micturition • Involuntary micturition at night, while coughing or passing flatus • After urinating, spasmodic pain in bladder
Tabacum	*State of tremendous nausea, giddiness, death - like pallor, vomiting, icy coldness, and sweat, with the intermittent pulse, Sensation of excessive wretchedness. Very despondent. Forgetful. Discontented*	• Let side Renal colic; violent pain along ureter

ALGORITHM OF TREATMENT PROCESS FOR UROLITHIASIS


Symptoms of:
• Burning micturition/frequency/urgency.
• Haematuria or reddish discoloration of urine
• Dysuria/fever/vomiting
On examination:
• Rigidity of lateral abdominal wall
• Tenderness over renal angle/kidney region.
• Percussion over kidney or renal angle leading to stabbing
Suspected case of urolithiasis
Patient with acute renal pain
Patient without acute renal pain
Select a most similar homoeopathic medicine on thebasis of acute symptoms present during acute phase
No/partial relief of pain despite correct selection
Clinical examination and laboratory investigations Plain X-ray & USG (KUB) for diagnosis of Urolithiasis
Relief of pain
Consider for integrative care
With removal stone
Stone still present
Patient develops complications
Detail case taking
Start individualized homoeopathic medicine and advise lifestyle modifications
• Start homoeopathic individualized treatmentand laboratory investigations, for prevention of recurrence
• Advise lifestyle modifications
Detailed case taking, Homoeopathic medicine along with clinical examination and laboratory investigations
Follow up regularly
Red flags
• Fever/sepsis
• Obstruction (both kidneys)
• Presence of only one kidney
• Pregnancy

UTERINE FIBROIDS

UTERINE FIBROIDS

CASE DEFINITION

Uterine fibroids (myomas or leiomyomas) are common benign smooth muscle tumors of the uterus which often appear during childbearing years.[1]

INCIDENCE/PREVALENCE

- Estimating the overall prevalence of fibroids in the population is difficult, since estimates shall vary depending on the population examined, whether asymptomatic women are included, and the sensitivity and specificity of the methods used to detect fibroids.[2]
- The global prevalence rate compromises of 21.4% among 30-60 years age group and the highest prevalence range of fibroids estimates is 3-20%, with African American and older women.
- Approximately 25% of Indian women in their reproductive years have noticeable fibroids. According to a 2010 World Health Organization report, fibroids affect between 20-25% of middle and later reproductive women, and close to 235 million women which represent 6.6% of the global women population are estimated to have been affected worldwide.[3]
- It is also observed that fibroids are seen in women of childbearing age group, 30-40 years (rarely before 20 years), nulliparous, or of low parity (only 20-30% of women are multiparous).[1-4]

AETIOLOGY

Fibroids arise when a single muscle cell in the uterine wall multiplies rapidly to form a tumor. The exact cause of uterine fibroids is unclear, but black women, obesity, nulliparity, and early menarche (onset of menses before 10 years), are implicated. However, the most important underlying factor is high estrogen levels which promotes the growth of fibroids. Hence, they tend to grow in pregnancy and decline after menopause. Their growth and development may also be impacted by other hormones viz. progesterone.[1,2,3,5,6] The fibroids are less common in women who have had several children and women who have used birth control pills for more than seven years.

---

1 The American College of Obstetricians and Gynecologists. Uterine Fibroids– FAQ074 [Internet]. US [cited 2015 Jan 01]. Available from: https://www.acog.org/-/media/For%20Patients/faq074.ashx

2 Parker W H. Uterine myomas: management. Fertility and Sterility. 2007,88(2):255-71.

3 Swain, Dharitri, et al. "Predictors and symptomatic burden of uterine fibroids among women in South-Eastern India: a cross-sectional survey analysis." International Journal of Reproduction, Contraception, Obstetrics and Gynecology. 2019; 8(2): pp 524.

4 Padubidri VG, Daftary NS. Howkins and Bourne Shaw's Text book of Gynaecology. 14th edition. Elsevier; 2008: p- 316-28.

5 Agency for Healthcare Research and Quality. The fibroid registry: Report of Structure, Methods, and Initial Results. AHRQ Publication No. 05(06)-RG008 [Internet]. Rockville [updated October 2005; cited 2015 Jan 01]. Available from: https://archive.ahrq.gov/research/fibroid/

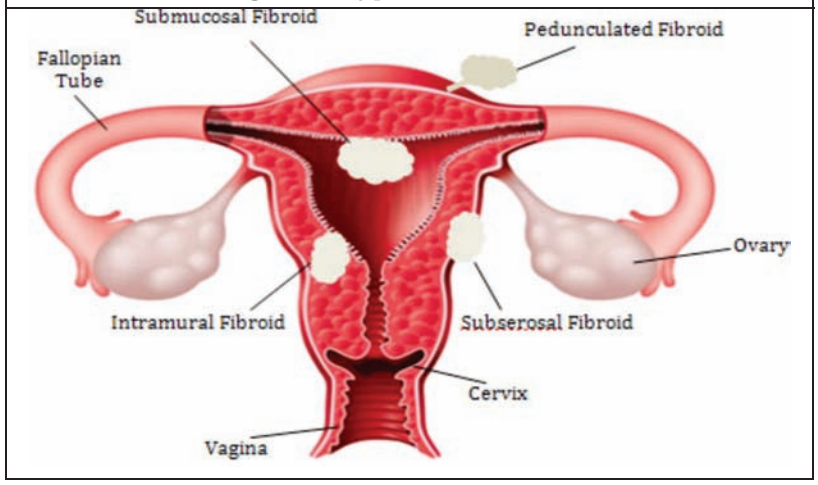
6 Okolo S. Incidence, aetiology and epidemiology of uterine fibroids. Best Practice & Research Clinical Obstetrics & Gynaecology. 2008; 22(4):571-88.

TYPES OF FIBROIDS

Fibroids are usually found inside or around the body of the uterus, but sometimes occur in the cervix. Fibroids can be divided into three categories[1,3,5,7] (See figure 1)

- 75% of fibroids are subserosal (located in the outer wall of the uterus)
- 15% are intramural (found in the muscular layers of the uterine wall)
- 10% are submucosal (which protrude into the uterine cavity).

Figure 1: Types of fibroids



DIAGNOSIS

Clinical presentation[1,2,5,7,8,9,10]

Most women with uterine fibroids have no symptoms. However, abnormal uterine bleeding is the most common symptom of a fibroid which is seen as:

- Bleeding between periods
- Heavy bleeding during the period, sometimes with blood clots
- Periods that may last longer than normal

Fibroids can also cause a number of symptoms depending on their size, location within the uterus, and how close they are to adjacent pelvic organs. Large fibroids can cause:

- Pelvic cramping or pain with periods
- Feeling of fullness or pressure in lower abdomen
- Pain during intercourse
- Pressure on the rectum with painful or difficult defecation
- Frequency and later retention of urine
- Ureteric obstruction
- Backache or leg pain

7 American society for reproductive medicine. Uterine fibroids - A guide for patients. Patient information series [Internet].U.S.;2003.[Cited2015Feb09].Availablefrom:www.lowmg.com/info/gynecology/gynecologic./uterine_fibroids_asrm.pdf

8 Carolyn J. Hildreth Uterine Fibroids Journal of American Medical Association. 2009; 301(1):122.

9 Gupta S, Jose J, Manyonda I. Clinical presentation of fibroids. Best Practice & Research Clinical Obstetrics & Gynaecology 2008; 22 (4): 615-26

10 Lumsden MA, Wallace E M. Clinical presentation of uterine fibroids. Baillieres Clin Obstet Gynaecol. 1998; 12(2):177-95.

INVESTIGATIONS

Uterine fibroids are diagnosed by -

- ***Pelvic examination:*** (per speculum (PS), per vaginal (PV) examination of the uterus to inspect, palpate and assess fibroid size): often, a pelvic mass cannot be determined to be a fibroid on the pelvic exam alone, and further investigation is required to differentiate it from other conditions such as ovarian tumors.
- ***Pelvic and/or transvaginal ultrasonography:*** for fibroid size and uterine volume
- Hysteroscopy to see the fibroids in the uterus when inserted through the vagina and cervix by the aid of a hysteroscope
- ***Dilatation & Curettage:*** It is to be done to rule out endometrial cancer
- Hb estimation for assessing anemia, if any

COMPLICATIONS [1,3]

- Twisting of the fibroid resulting in severe abdominal pain, usually caused by occluded blood vessels that feed the tumor and tumor engorged with blood
- Anemia from heavy bleeding when there is a rupture of the large vein of a subserous myoma
- Urinary tract infections, consequent to deficient emptying of the bladder
- Infertility
- Fibroids when present along with pregnancy may require C-section; pre-term delivery or cause heavy bleeding right after giving birth

DIFFERENTIAL DIAGNOSIS [3]

Differential diagnosis includes conditions resulting in abdominal swellings, like:

- Ovarian cyst
- Pregnancy
- Endometrial carcinoma
- Adenomyosis
- Endometriosis (Chocolate cyst)

RED FLAGS

- Severe pain (twisting of fibroid)
- Anemia from heavy bleeding
- Recurrent Urinary tract infections
- Malignancy

EVALUATION AND ASSESSMENT

The UFS-QOL[11] can be used to assess the quality of life of patients suffering from symptomatic uterine fibroids.

MANAGEMENT

General management

Fibroids which are asymptomatic and often very small in size usually do not require treatment. Medicinal treatment is indicated in symptomatic fibroids. However, a careful and timely assessment of the pathology as well as its symptoms is required to understand the response to the treatment and the requirement of referral for surgery. [1,5,7,8,12]

Certain food habits are implicated in the prevention of fibroids or in arresting the growth of fibroids and aiding in treatment.[13] These include: increased consumption of fruits, green or sea vegetables, whole grains, nuts, and seeds; soy foods such as tofu etc., flaxseeds, Vitamin E, Vitamin C and bioflavonoids, avoidance of foods with high fat or sugar content, caffeine and alcohol.

11 Spies JB, Coyne K, Guaou Guaou N, Boyle D, Skyrnarz-Murphy K, Gonzalves SM. The UFS-QOL, a new disease-specific symptom and health-related quality of life questionnaire for leiomyomata. Obstet Gynecol. 2002 ;99(2):290-300.

12 Marret H, Fritel X, Ouldamer L, Bendifallah S, Brun JL De Jesus I, et al. Therapeutic management of uterine fibroid tumors: updated French guidelines. Eur J Obstet Gynecol Reprod Biol. 2012; 165 (2):156-64.

13 Uterine fibroids. Gale Cengage learning 2008; Miami: 2008 [cited 2015 Nov 12]. Available from: http://www.altmd.com/Articles/Uterine-Fibroids--Encyclopedia-of-Alternative-Medicine

Homoeopathic management

Homoeopathic literature[14-21] highlights the role of various medicines in uterine fibroids. Clinical research studies[22-27] and case reports[28-33] of the documents by the researchers also throw light on the usefulness of homoeopathy not only to control distressing symptoms of uterine fibroids but also to some extent in complete dissolution of fibroids. A complete case history eliciting the totality of symptoms formulated after considering the symptomatology, mind and dispositions, physical generals, predispositions, relevant past/family/personal history, etc. shall always be the sole guide for selecting the similimum for the case.

In synthesis repertory[34], there are around 95 medicines mentioned under rubric Female genitalia/Sex-Tumors-Uterus-Myoma for uterine fibroid. A few remedies are known to have a palliative role especially in controlling bleeding associated with fibroids when given on their specific indications. For e.g.: ***Thlaspi bursa pastoris:*** Uterine hemorrhage, with cramps and expulsion of clots; metrorrhagia; hemorrhage from violent uterine colic; blood dark offensive and stains indelibly. Hemorrhage from uterine fibroid with backache or general bruised soreness. ***Sabina:*** Uterine hemorrhage, blood is fluid and clots together, aggravated by least motion; pain from sacrum to pubes,

14 Zandvoort RV. Complete Repertory 3.0. (English) 5.1 Repertory, Mac Repertory for Windows. USA: Kent Homoeopathic Associates.

15 Murphy R. Homoeopathic Medical Repertory. Third Edition. Lotus Health Publishers; 2005.

16 Boericke W. New Manual of Homoeopathic Materia Medica with Repertory: Third Revised & Augmented Edition based on Ninth Edition. New Delhi: B. Jain Publishers; 2010.

17 Allen HC. Keynotes- Rearranged and classified with leading remedies of the Materia Medica and bowel nosodes. 10th Reprint edition. New Delhi: B.Jain Publishers; 2006.

18 Clarke JH. A dictionary of Practical Material Medica . Reprint edition.. New Delhi :B Jain Publishers Pvt. Ltd.; 2007.

19 Pulford. Key to the Homeopathic Materia Medica. Second Edition. New Delhi: B Jain Publishers.

20 Boger CM. A synoptic key of the Materia Medica. Reprint edition. New Delhi: B. Jain Publishers Pvt. Ltd.;2008.

21 Allen TF. Handbook of Materia Medica and Homeopathic Therapeutics. First edition. Philadelphia: F.E. Boericke; 1889.

22 Oberai P, Indira B, Varanasi R, Rath P, Sharma B, Soren A, et al. A multicentric randomized clinical trial of homoeopathic medicines in fifty millesimal potencies vis-à -vis centesimal potencies on symptomatic uterine fibroids. Indian J Res Homoeopathy.2016; 10:24-35.

23 Popov AV, Homœopathy in treatment of patients with fibromyoma of the uterus. British Homoeopathic journal.1992; 81(4): 164-67.

24 Gupta G, Gupta N, Singh V, Bisht D Uterine Fibroids: A Clinical Study with USG Follow-up. National Journal of Homoeopathy. 2003; 5(3): 172-80.

25 Shangloo GK. Role of Homoeopathy in Uterine Fibroid and Ovarian Cyst Treatment. . Available from: http://hpathy.com/.../role-of-homoeopathy-in-uterine-fibroid-and-ovarian-cyst-treatment

26 Quadri I J, Ali S, Vatsalya B, Ponnam HB, Nikhat PS. Role of homoeopathic medicines in treating uterine fibroid: a prospective observational Study. Indian J Res Homoeopathy. 2012;6(2); 8-14.

27 Shah D, Patel G, Shah P, Study on Effectiveness of Homoeopathic Medicine In Uterine Fibroid: Study on Effectiveness of Homoeopathic Medicine In Uterine Fibroid. National Journal of Integrated Research in Medicine.2018; 9(4), 82–84.

28 Wadhwani GG, Uterine Fibroma: A case cured by homoeopathy AJHM. 2003; 106 (3): 121-24.

29 Sevar R. —Aurum muriaticum natronatumfour case reports Homeopathy. 2007;96(4): 258-269.

30 Iqbal JQ, Ali S, Nikhat PS, Vatsalya B. A case of uterine fibroid. Indian J Res Homoeopathy. 2008; 2:50-8.

31 Sharma A. Homoeopathic management of uterine leiomyomata: A case report. Indian J Res Homoeopathy. 2010; 4(3):51-5.

32 Gupta G. Singh R. An Evidence Based Case of Uterine Fibroids Cured by Pulsatilla. Journal of Case Studies in Homeopathy. 2013; 1(3): 1 – 8.

33 Kumari P. Uterine Fibroid Treated with Homoeopathic Medicine: A Case Report .Homœopathic Links .2022;35(3):205–209.

34 Schroyens F. Synthesis Repertory. ver. 9.1; New Delhi; B Jain Publishers Pvt Limited; 2002.

and from below upwards shooting up the vagina. ***Trillium pendulum:*** Hemorrhage from fibroids; with sensation as though hips and back were falling into pieces; better by tight bandages. ***Erigeron:*** Hemorrhage from the uterus with painful micturition; metrorrhagia with violent irritation of rectum and bladder; profuse bright red blood. ***Hamamelis virginica:*** Uterine hemorrhage with dark, profuse blood and soreness in the abdomen. Metrorrhagia, occurring midway between menstrual periods. ***Lapis albus:*** Fibroid tumors with intense burning pains through the parts with profuse hemorrhage. ***Calcarea iodatum:*** Uterine fibroids with goiter. Some other glandular remedies are ***Conium maculatum, Kalium iodatum and Aurum iodatum.***

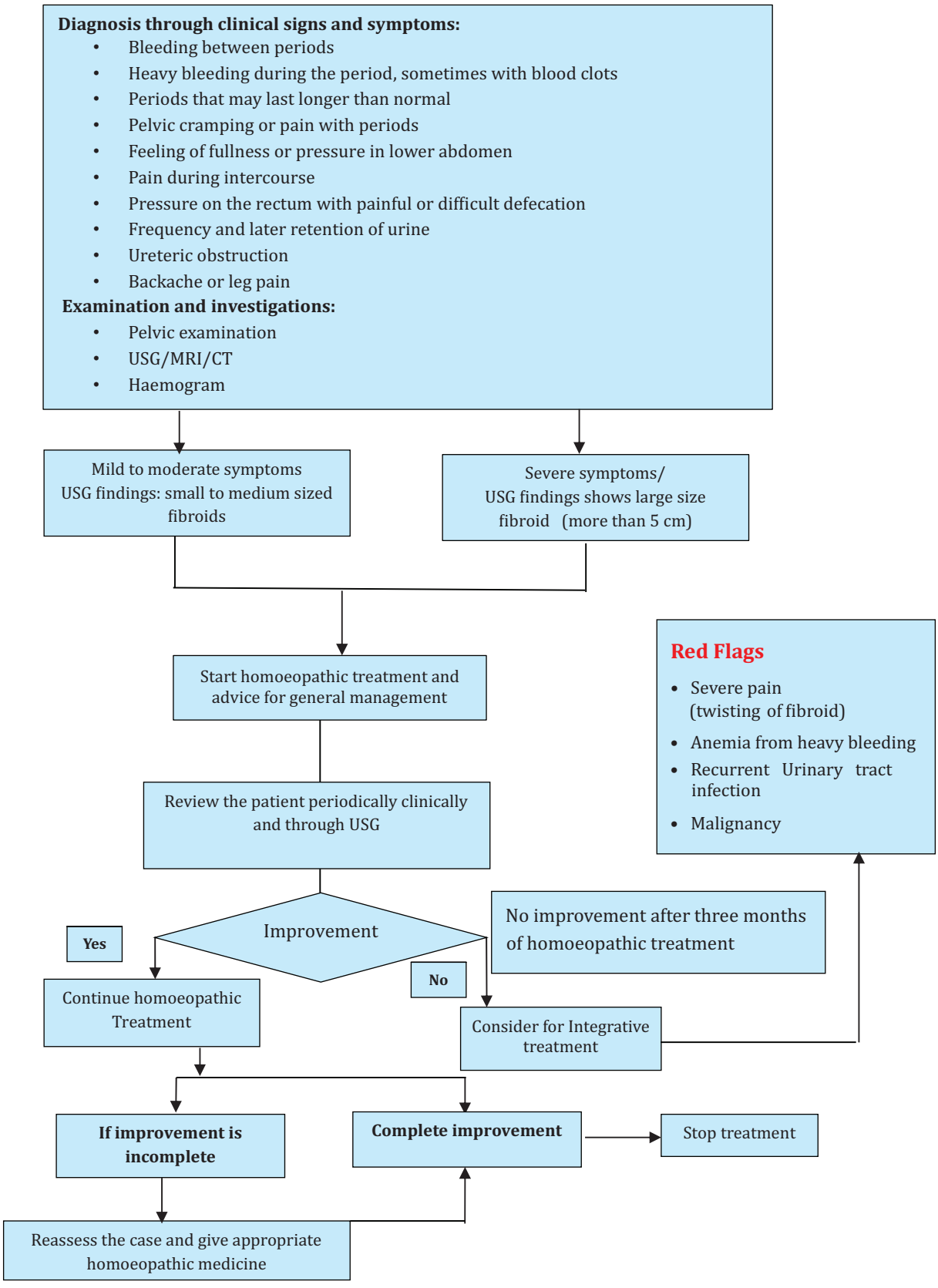
Limitations of homoeopathic treatment/referral should not be ignored. Fibroids larger than 5 cm, subserous fibroids causing symptoms due to pressure on other abdominal structures (ureters / rectum) and submucosal fibroids which tend to bleed heavily (resulting in severe anemia) in childbearing age during menstrual cycles if not responding to homoeopathic treatment in 3 months will have limitations in management and may need surgical intervention. The indications of the remedies prescribed are given below:

Medicines	General indications	Characteristic particulars
Pulsatilla nigricans	*Hot patient; marked changeability of symptoms; aversion to fatty foods, warm foods and drinks, dislikes butter; thirstless with great dryness of the mouth; tongue coated yellow or whitish; discharges thick, bland, and yellowish - green; pains appear suddenly, leave gradually; worse towards evening and in the warm room; better in the open air, by slow, gentle motion and cold applications; desire for company, mild, gentle, affectionate, yielding, weeping disposition*	• Menses irregular; menstrual flow changeable; tardy, or premature, of too short or too long duration, or entirely suppressed • History of menses delayed at puberty • Marked dysmenorrhea at beginning of puberty • Uterine troubles with heavy pressive pain in the abdomen and small of back; as from a stone; limbs go to sleep; ineffectual urging to stool
Sepia officinalis	*Chilly patient; tall, thin built with yellow saddle across; upper part of cheeks and nose, big belly; dry flabby skin; Predisposed to take cold at the change of weather; Desire for sour food which aggravates Cheerful, active when well but indifferent and quarrelsome when sick; self-absorbed, sad, weeping and indolent*	• Irregular menses of nearly every form, early, late, scanty, profuse, amenorrhoea or menorrhagia • Violent stitches upward in the vagina; pains from the uterus to the umbilicus • Associated symptoms include weakness of the female sexual organs and prolapse of the uterus with the sensation of pressure and bearing down as if everything would protrude from the pelvis;

Medicines	General indications	Characteristic particulars
		must cross limbs tightly to "sit close"
Calcarea carbonica	*Chilly patient; takes cold easily; fat, fair, flabby children with a large head, distended abdomen with a red face; weak, easily tired; head sweats profusely while sleeping; tendency to lymphatic glandular enlargement; sour smelling discharges; longing for fresh air; desire for eggs and indigestible things, aversion to meat and milk; fearful, shy, timid, slow and sluggish*	• Menses too early, too profuse, too long lasting • Pre - menstrual syndrome with anxiety, headache, vertigo, colic, leucorrhoea and sore breast • Cutting pains in uterus during menstruation • The least excitement causes return of menstrual flow • Burning and itching of parts before and after menstruation
Aurum muriaticum natronatum	*Pronounced effect on the female organs*	• Inflammation of the uterus filling the whole pelvis, interfering with the action of the bowels and bladder. Ulceration of neck of womb and vagina • Leucorrhoea, with spasmodic contraction of vagina. Indurated cervix • Menses are profuse and premature • Ossified uterus • Coldness in abdomen
Natrum muriaticum	*Hot patient; poorly nourished, great emaciation (marked on neck); losing flesh while living well; craving for salt; aversion to bread and fatty things; constipated, increased thirst; mapped tongue with red insular patches; melancholic; sad, plays alone; Irritable, cross, cries when spoken to; awkward, hasty, drops things from nervous weakness; disposition to weep without cause, consolation aggravates*	• Difficulty in appearance of first menses; menses irregular, usually profuse; headache before, during, and after menses • Before menses, moroseness and irritability; at commencement of menses, sadness; during menses, cramps in abdomen. Spitting blood at menstrual nisus

Medicines	General indications	Characteristic particulars
Phosphorus	*Chilly patient; tall fast growing child with tendency to stoop; hemorrhagic tendency; craving for salt, cold food and drink; oversensitive to external impressions; nervous and affectionate, anxious especially during thunderstorm.*	• Menses too early and scanty - not profuse, but last too long • Weeps before menses • Slight haemorrhage from uterus between periods • Leucorrhoea profuse, smarting, corrosive, instead of menses • Amenorrhœa, with vicarious menstruation

ALGORITHM OF TREATMENT PROCESS FOR UTERINE FIBROIDS


Diagnosis through clinical signs and symptoms:
• Bleeding between periods
• Heavy bleeding during the period, sometimes with blood clots
• Periods that may last longer than normal
• Pelvic cramping or pain with periods
• Feeling of fullness or pressure in lower abdomen
• Pain during intercourse
• Pressure on the rectum with painful or difficult defecation
• Frequency and later retention of urine
• Ureteric obstruction
• Backache or leg pain
Examination and investigations:
• Pelvic examination
• USG/MRI/CT
• Haemogram
Mild to moderate symptoms
USG findings: small to medium sized fibroids
Severe symptoms/
USG findings shows large size fibroid (more than 5 cm)
Start homoeopathic treatment and advice for general management
Review the patient periodically clinically and through USG
Improvement
Yes
No
Continue homoeopathic Treatment
No improvement after three months of homoeopathic treatment
Consider for Integrative treatment
Red Flags
• Severe pain (twisting of fibroid)
• Anemia from heavy bleeding
• Recurrent Urinary tract infection
• Malignancy
If improvement is incomplete
Complete improvement
Stop treatment
Reassess the case and give appropriate homoeopathic medicine

Chapter 20

VITILIGO

VITILIGO

CASE DEFINITION

Vitiligo is a common chronic skin depigmentation disorder. It is due to the stoppage of melanin formation by the melanocytes and presents as asymptomatic depigmented macules anywhere on the body including mucous membranes of lips and genitalia.[1]

INCIDENCE/PREVALENCE

It affects around 0-5% of the world's population. Prevalence as high as 8.8% has been reported in India where stigma associated with the disease is high. [2,3]

AETIOLOGY[1]

- Auto-immune mechanism
- Genetic factors
- Prolonged pressure in a particular area
- Repeated trauma to prone areas of skin
- Psychological stress (often appear to initiate or accelerate the development of the lesions)
- Associated with other diseases like hyper & hypothyroidism, pernicious anemia, Addison's disease, diabetes mellitus, malignant melanoma, and halo naevus
- Other factors like the destruction of melanocytes themselves due to a defect in the natural protective mechanism which removes toxic melanin precursors

PATHOPHYSIOLOGY[1]

There is a marked reduction or even absence of melanocytes and melanin in the epidermis. Studies have not yet proved whether there is the destruction of melanocytes or destruction of pigment-producing granules in the cells or whether the cells are structurally maintained but function less.

Histochemically, there is a lack of DOPA–positive melanocytes in the basal layer of the epidermis. The macules vary in size and shape as well as in colour. Some of the lesions or some parts of the lesions may be hypopigmented rather than depigmented. The course of the disease is very variable. The lesions in some patients may remain static or progress very slowly while in others the disease progresses very fast and cover the whole body in a few months. In a few cases, spontaneous re-pigmentation has been noticed; it is usually perifollicular. In some lesions the hairs are white; this is called leucotrichia.

---

1 Gupta R, Manchanda RK. Textbook of Dermatology for Homeopaths. 3rd edition, New Delhi : B. Jain publisher, 2009.

2 Eleftheriadou V. Which Outcomes should we measure in Vitiligo? Results of a Systemic Review and a survey among Patients and Clinicians on Outcomes in Vitiligo Trials; The British Journal of Dermatology. 2012 Oct;167(4): 804-14.

3 Whitton ME. Interventions for Vitiligo (Review); The Cochrane collaboration, published by John Wiley & Sons, Ltd,[cited 11 Jul 2015]. Available at: http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD003263.pub4/pdf

TYPES

Two types:

- *Non-segmental vitiligo* is an acquired chronic de-pigmentation disorder characterized by white patches. These are often symmetrical and usually increase in size with time.
- *Segmental vitiligo* is a variant of vitiligo confined to one unilateral segment. One unique segment is involved in most patients but two or more segments on the same or opposite sides may be involved, or de-pigmentation may follow a dermatome distribution or Blaschko's lines.

DIAGNOSIS[4]

Clinical presentation

Where vitiligo is classical, the diagnosis can be made even in primary care setup, based on the clinical presentation:

- Characteristic depigmented skin patches, no surface change and usually no redness.
- Very occasional inflammation may be seen at the advancing edge of a vitiligo macule.
- No loss of sensation

Atypical presentations may require expert assessment by a dermatologist. A Wood's lamp examination may be of use in determining the extent and activity of vitiligo, as well as monitoring response to therapy and the progress of lesions over time.

Certain relevant points in the clinical history must be elicited. (Refer to 'Management' given below)

INVESTIGATIONS[5]

Recommended procedures in case of vitiligo to identify underlying factors/comorbidity include:

- Anti-TPO, antithyroglobulin antibodies
- TSH to assess thyroid function and anti-TSH antibodies
- Additional autoantibodies (only if patient's history, family history and/or laboratory parameters point to a strong risk of additional autoimmune disease), endocrinologist/ immunologist advice if multiple autoimmune syndromes detected

If the diagnosis is uncertain

- Punch biopsy from lesional and non-lesional skin.
- Other tests, e.g., mycology, and molecular biology to detect lymphoma cells, etc. to confirm the diagnosis.

DIFFERENTIAL DIAGNOSIS[4]

The three main diseases that can be mistaken for vitiligo are:

---

4 Gawkrodger DJ, Ormerod AD, Shaw L, Mauri-Sole I, Whitton ME, Watts MJ, et al. Guideline for the diagnosis and management of vitiligo. Br J Dermatol. 2008 Nov;159(5):1051-76.

5 A Taieb, A Alomar, M Böhm, et al. Guidelines for the Management of Vitiligo; The European Dermatology Forum Consensus;The British Journal of Dermatology. 2013;168(1):5-19.

- **Tinea versicolor:** superficial yeast infection, loss of pigment in darker skinned individuals, pale macules typically on the upper trunk and chest, with a fine dry surface scale.
- **Piebaldism:** an autosomal dominant disease, absence of melanocytes from the affected areas of the skin, usually presents at birth with depigmented areas that are usually near the mid-line on the front, including a forelock of white hair.
- **Idiopathic guttate hypomelanosis:** multiple small, white macules are noted, mostly on the trunk or on sun-exposed parts of the limbs.
- When vitiligo affects only the genital areas, it can be difficult to exclude lichen sclerosis, which sometimes can coexist with vitiligo.

Other conditions to be differentiated include:

- Halo naevus
- Hypopigmented naevus
- Idiopathic guttate hypomelanosis
- Leprosy
- Lichen sclerosus (for genital vitiligo)
- Melanoma-associated leucoderma
- Melasma
- Mycosis fungoides-associated depigmentation
- Naevus anaemicus
- Naevus of Ito
- Piebaldism
- Pityriasis alba
- Pityriasis versicolor
- Post-inflammatory depigmentation, e.g., scleroderma, psoriasis
- Atopic eczema
- Post-traumatic depigmentation
- Topical or drug-induced depigmentation
- Tuberous sclerosis

EVALUATION AND ASSESSMENT

- Vitiligo Area Scoring Index[6]
- Vitiligo Symptom Score (VSS)[7]

6 Komen L, da Graça V, Wolkerstorfer A, de Rie MA, Terwee CB, van der Veen JP. Vitiligo Area Scoring Index and Vitiligo European Task Force assessment: reliable and responsive instruments to measure the degree of depigmentation in vitiligo. Br J Dermatol. 2015 Feb;172(2):437-43.

7 Chakraborty P S, Kaushik S, Debata L, Ram B, Kumar R, Shah M, et al. A multicentric observational study to evaluate the role of homoeopathic therapy in vitiligo. Indian J Res Homoeopathy. 2015; 9: 167-75.

COMPLICATIONS[8]

- Sunburn
- Skin cancer
- Social stigmatization
- Mental Stress
- Eye involvement like iritis
- Hearing loss because of loss of cochlear melanocytes
- Other complications are related to medications like skin atrophy after prolonged use of topical steroids.

RED FLAGS

- Uncontrolled TSH levels
- Endocrinal disturbances
- Uncontrolled level of autoantibodies

MANAGEMENT

General management[1]

Vitiligo is an absolutely harmless disease except for its cosmetic implications. A patient of vitiligo can be as efficient physically, mentally, and sexually as any other individual. The spread of disease can be arrested and a substantial amount of re-pigmentation of the lesions can be achieved in a majority of individuals who undergo appropriate treatment. Treatment must be individualized, and patients should be made aware of the risks associated with therapy. No single therapy for vitiligo produces predictably good results in all patients, and the response to therapy is highly variable. The following points must be kept in mind during treatment:

- Each & every case should be evaluated in depth, to find out any known factors causing vitiligo like pressure, trauma, etc. which should be removed or minimized as far as possible. Nails should be trimmed and filed to avoid scratching. These simple procedures may start re-pigmentation of the lesion in early cases of vitiligo.
- Response to the treatment is slow. Re-pigmentation of the lesions usually starts around hair follicles, thus the lesions in the hairy area show early and quick response.
- In patients with extensive vitiligo, lesions with leucotrichia of long duration or located on non-hairy areas like palms, soles, fingertips or mucosal surfaces, the response to treatment is very poor and incomplete.
- Photographs may be required for monitoring treatment response.
- Psychological status and assessment of the quality of life of the patients are of importance (Refer to text above).

8 Jan N A, Masood Sadia. Vitiligo. In StatPearls [Internet]. StatPearls Publishing; 2022.

Homoeopathic management

Homoeopathic literature records many remedies for this disease. Medicines need to be selected individually by holistic coverage of the entire symptomatology of the patient, taking into account all the characteristic symptoms, mental make-up as well as accessory circumstances. A few case reports[9-13] and research studies[7,14-18] in the past showed the beneficial role of homoeopathy in halting the progress, reducing hypopigmentations bringing about hyperpig mentation in vitiligo.

Boericke's repertory[19] mentions. ***Arsenicum album, Ars. sulph. flavum, Bacillinum, Graphites, Merc. sol, Natrum muriaticum, Nitric acid, Nux vomica, Phosphorus, Sepia, Silicea, Sulphur*** and ***Thuja*** under the rubric "skin: leucoderma."

Frequently used drugs include ***Argentum nitricum, Calc. carb., Lyco., Natrum mur., Nitric acid, Sepia, Silicea*** and ***Sulphur.*** Other drugs of importance are ***Alumina, Ars-s-f, Calotropis, Hydrc., Lac. c., Mang., Natrum- caust., Oxyg., Pip- m., Pitu-gl., Sel., Stannum, Sambucus, Thuja, Zinc- p.***

9 Jha D K, Debata L. A Case of Vitiligo Treated by Sulphur. Indian J Res Homoeopathy. 2009; 3(3): 34-40.

10 Sadarla R K. A case of vitiligo treated with phosphorus. Indian Journal of Research in Homoeopathy. 2008; 1(1): 49-57.

11 Mahesh S, Mallappa M, Tsintzas D, Vithoulkas G. Homeopathic Treatment of Vitiligo: A Report of Fourteen Cases. Am J Case Rep. 2017 Dec 2;18: 1276-1283.

12 Purkait R, Debnath D, Bhattacharjee B, Choubey G. Homoeopathy in Obstinate Non-Segmental Vitiligo: An Evidence-Based Report of Two Cases. Homœopathic Links. 2022 Sep;35(03):181-90.

13 Agarwal MC, Singh PK, Kuntal RS, Mishra C, Meena S. Role of LM potency of homoeopathic similimum in case of vitiligo: a case report. Int J Homeopathy Sci. 2020;4(03):302-5.

14 Ganguly S, Saha S, Koley M, Mondal R. Homoeopathic treatment of vitiligo: an open observational pilot study. Int J High Dilution Res [online]. 2013 [cited 2015 November 13]; 12(45):168-177. Available from:

http://www.feg.unesp.br/~ojs/index.php/ijhdr/article/view/638/683

15 Khatua GK, Dasgupta S, Basu SK, Swarnakar G. Significant remission of vitiligo by ultra-diluted alternative medicines. Asian Journal of Pharmaceutical and Clinical Research. 2012; 5(2).

16 Chakraborty PS, Kaushik S, Debata L, Ram B, Kumar R, Shah Mahesh, et al. A multicentric observational study to evaluate the role of homoeopathic therapy in vitiligo Indian J Res Homoeopathy [serial online] 2015 [cited 2018 Mar 31]; 9:167-75. Available from: http://www.ijrh.org/text.asp? 2015/9/3/167/166378

17 Mir AA, Wani GN, Prajapati R, Saklani N, Karuppusamy A, Jha PK, et al. Add-on Psoralea corylifolia mother tincture external application to individualized homeopathic medicines in treatment of vitiligo: Open, randomized, pragmatic, pilot trial. Advances in Integrative Medicine. 2022 Mar 1; 9(1):53-62.

18 Karuppusamy A, Paul S, Chattopadhyay A, Balamurugan D, Malathi M, Kumar A, et al. Individualized Homeopathic Medicines in Treatment of Vitiligo: Double-Blind, Randomized, Placebo-Controlled Pilot Trial. Journal of Integrative and Complementary Medicine. 2022 Jan 1; 28(1):96-102.

19 Boericke W. Boericke's New Manual of Homeopathic Materia Medica with Repertory: Third Revised & Augmented Edition Based on Ninth Edition. India: B. Jain Publishers; 2010.

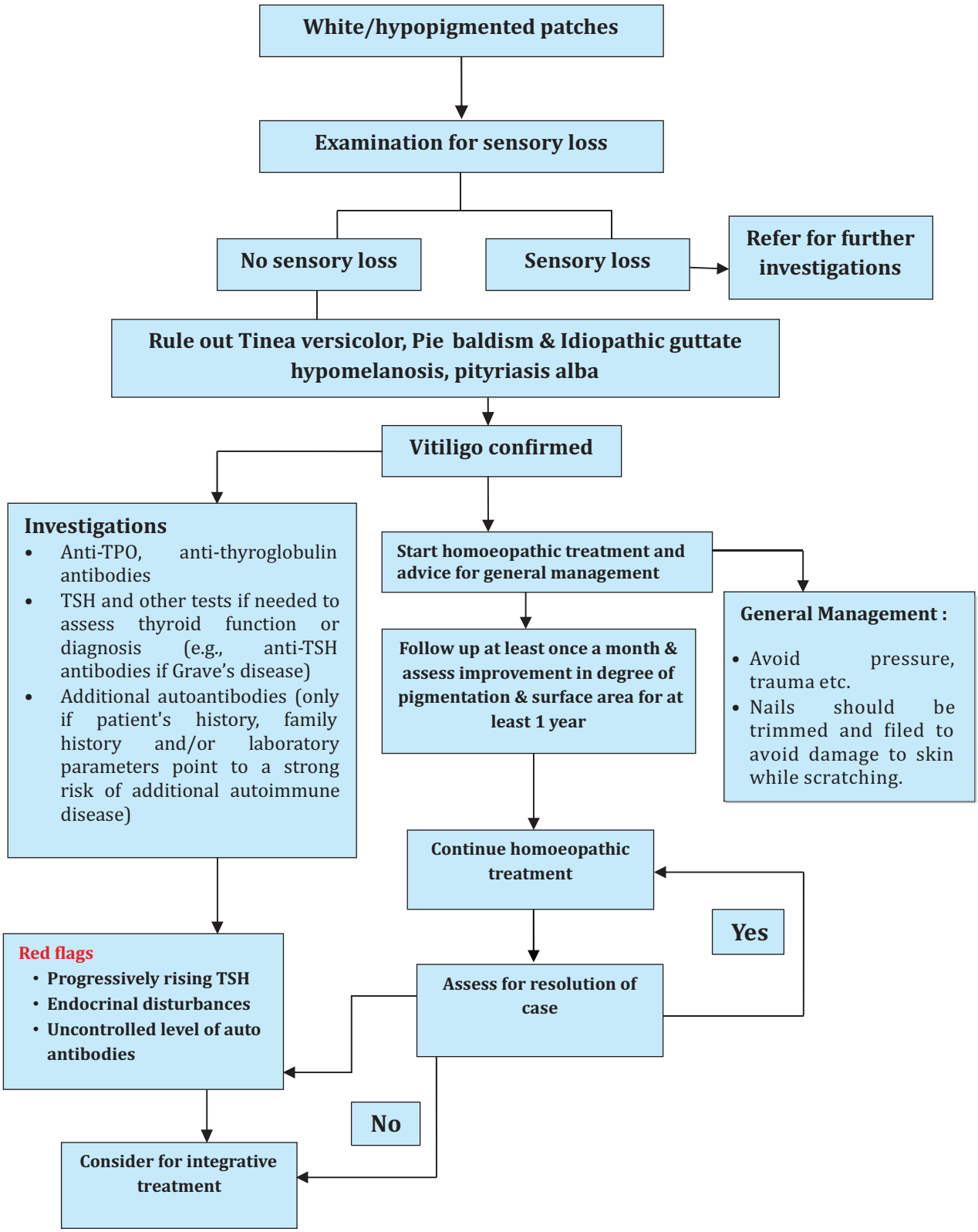
Indications of a few important constitutional drugs are given below:[7-20]

Medicines	General indications	Characteristic particulars
Calcarea carbonica	*Chilly patient; takes cold easily; fat, fair, flabby with a large head, distended abdomen with a red face; pale, weak, easily tired; head sweats profusely while sleeping; sour-smelling discharges; longing for fresh air; slow development of milestones; the tendency for lymphatic glandular enlargement; desire for eggs and indigestible things; aversion to meat & milk; fearful, timid, shy, slow and sluggish*	• Pale skin, chalky look. Skin unhealthy; readily ulcerating; flaccid • Partial sweats. Sweat of hands. Night sweats, especially on the head, neck, and chest • Glands swollen. Chilblains
Lycopodium clavatum	*Intellectually keen but physically weak; upper part of body emaciated, lower part semi-dropsical; Complexion pale, dirty, sallow with deep furrows; looks prematurely old; Recurrent respiratory and gastro-intestinal affections; the tendency for flatulent dyspepsia; Complaints worse from 4 to 8 pm; Right-sided complaints or symptoms shift from right to left; Desires warm foods and drinks, sweets; dominating, cranky, lack of self-confidence, precocious*	• Skin becomes thick and indurated. Brown spots, freckles worse on the left side of face and nose • Dry, shrunken, especially palms; hair becomes prematurely gray • Viscid and offensive perspiration, especially of feet and axilla
Natrum muriaticum	*Hot patient: poorly nourished, great emaciation (marked on the neck); losing flesh while living well; craving for salt; aversion to bread and fatty things; constipated; increased thirst; mapped tongue with red insular patches; melancholic, sad, plays alone, irritable, cross, cries when spoken to; awkward, hasty, drops things from*	• Greasy, oily skin, especially on hairy parts • Affects hair follicles. Alopecia

20 Clarke J H. A Dictionary of Practical Materia Medica, New issue with additions in three volumes. New Delhi: B. Jain Publishers, 2006.

Medicines	General indications	Characteristic particulars
	nervous weakness; disposition to weep without cause, consolation aggravates	
Phosphorus	*Chilly patient tall, fast - growing child with a tendency to stoop; haemorrhagic tendency; craving for salt, cold foods, and drinks; oversensitive to external impressions; nervous and affectionate, anxious especially during a thunderstorm*	• Desquamation of skin. Burning in the skin. Excoriated spots, with cracks and shootings • Round, tettery spots over the whole body. Freckles (nose) • Dry, furfuraceous tetters. Yellow or brown spots on the skin (esp. chest and abdomen) • Copper-coloured or bluish spots, like petechie. Red spots. Pale skin. Tingling in the skin
Sepia officinalis	*Chilly patient; tall, thin built with yellow saddle across the upper part of cheeks and nose, big belly; dry flabby skin. Predisposed to take cold at the change of weather; Desire for sour food which aggravates Cheerful, active when well but indifferent and quarrelsome when sick self-absorbed, sad, weeping, and indolent*	• Itching; not relieved by scratching; worse in bends of elbows and knees • Chloasma. Ringworm - like eruption every spring • Hyperidrosis and bromhidrosis. Sweat on feet, worse on toes; intolerable odour
Sulphur	*Hot patient, kicks off the cloth at night; dirty filthy, does not want to be washed; lean, thin, stoop-shouldered children who walk and sit stooping; red orifices; desires sweets; when the best - selected remedy fails to improve; restless, quick-tempered*	• Skin affections after local medication. Pruritus, especially from warmth, in the evening, often recurs in springtime, in damp weather • Hard hair and skin. Dry, scaly, unhealthy skin • Freckles. Itching, burning; worse scratching and washing

ALGORITHM OF TREATMENT PROCESS FOR VITILIGO


White/hypopigmented patches
Examination for sensory loss
No sensory loss
Sensory loss
Refer for further investigations
Rule out Tinea versicolor, Pie baldism & Idiopathic guttate hypomelanosis, pityriasis alba
Vitiligo confirmed
Investigations
• Anti-TPO, anti-thyroglobulin antibodies
• TSH and other tests if needed to assess thyroid function or diagnosis (e.g., anti-TSH antibodies if Grave's disease)
• Additional autoantibodies (only if patient's history, family history and/or laboratory parameters point to a strong risk of additional autoimmune disease)
Start homoeopathic treatment and advice for general management
General Management :
• Avoid pressure, trauma etc.
• Nails should be trimmed and filed to avoid damage to skin while scratching.
Follow up at least once a month & assess improvement in degree of pigmentation & surface area for at least 1 year
Continue homoeopathic treatment
Yes
Assess for resolution of case
Red flags
• Progressively rising TSH
• Endocrinal disturbances
• Uncontrolled level of auto antibodies
No
Consider for integrative treatment